



## Ozark Chapter / Sierra Club

Ken Midkiff, Director  
Ozark Chapter/Sierra Club  
1007 N. College Ave., Ste. #1  
Columbia, MO 65201-4794

DATE: May 29, 2001

TO:

Julie Murray  
Assistant Regional Counsel  
USEPA Region VII

Tony Petruska  
RCRA/CERCLA  
USEPA Region VII

John Young  
Director, MODNR-DEQ

Cindy Kemper  
Program Director, MODNR-DEQ Hazardous Waste

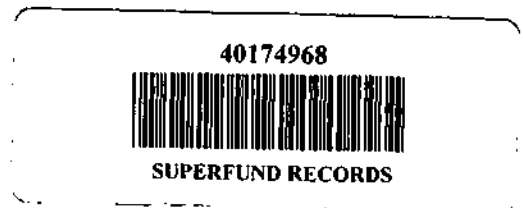
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**AIR, RCRA & TOXICS DIVISION**

Site:	HERCULANEUM
ID #:	40174968
Break:	1e
Other:	AD17 5/29/01

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**SUBJECT: Administrative Order of Consent (AOC) (Doe Run's Herculaneum Smelter)**

I wish to relay in writing the thrust of the comments I made to the EPA and MODNR-DEQ staffers attending the meeting of May 15, 2001. Note that these would have been submitted as our comments during the comment period on the AOC had we been notified that such was being considered.

### A. Positive attributes

1. The AOC document does an excellent job of detailing the impacts to human health, water and air quality, and to fish and wildlife. Especially notable are the data on air emissions, lead blood levels in children, soil contamination, and stream sediment contamination.
2. The clean-up plans in the Statement of Work are appropriate, except for the time frames.
3. It is applaudable that Doe Run will be expected to attain compliance with national ambient air quality standards and state and federal water quality standards as outlined in the AOC and the Statement of Work.

### B. Questionable attributes

1. We remain concerned that the level of emissions will re-contaminate any cleaned-up areas.

2. The plans for addressing leachate and runoff from the slag heap essentially codify current levels of contamination.

3. The time frame for compliance with state and federal air and water laws and standards are not protective of the public health nor the natural environment (fish and wildlife).

#### C. Negative attributes

1. Given the negative impacts to public health – particularly developmental disabilities and mental deficiencies in children – from airborne lead emissions, it is lamentable that the state and federal regulatory agencies allow such emissions to continue. Another generation of children will be subjected to this contamination. In essence, the USEPA and MODNR-DEQ have signed off on allowing such disabilities and deficiencies to continue.

2. There will be re-contamination of the clean-up sites by continuing to allow high levels of airborne lead emissions – this will necessitate a second clean-up after emissions reach legally-permissible levels. It would seem to make much more sense to require the smelter to immediately cease and desist excessive emissions (above national ambient air quality standards, NOT the non-protective levels in the SIP), then clean-ups could begin without danger of recontamination.

3. The time frame for achieving compliance with state and federal air and water quality laws and regulations is much too long. This company has been out of compliance with almost all environmental, public health, and worker safety laws and standards since such laws and standards have been in place. Yet, this AOC seems to allow such to continue with the full permission of the USEPA and MODNR-DEQ.

#### D. Recommendations

1. Given the documented and considerable impacts to public health and the environment, the Missouri Health Department or EPA-ATSDR should issue a statement that Doe Run's Herculaneum Smelter presents a **"clean, present and imminent threat to public health and fish and wildlife"**; and USEPA/MODNR-DEQ should then issue a **"cease and desist"** order. This would require the company to immediately comply with all state and federal laws and standards pertaining to air and water quality.

2. Cause the Doe Run Company to be placed on an expedited clean-up schedule of contaminated soils in high-risk areas (yards, playgrounds, parks). This should be completed no later than July 2001.

3. Stipulated penalties should be at the maximum allowed by law ((\$27500 per day per violation) and include a closure order in the event of more than three polluting events in any 365-day period.

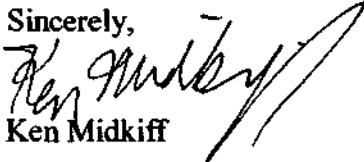
#### E. Summary

For too long, this company has been allowed to flagrantly flout the public-health protective laws and standards of this state and nation. It is time for this company to be held accountable for its activities that have fouled the air and water, and contributed to illness, premature deaths, and childhood developmental disabilities.

The AOC is an instrument that reflects a lack of will of the USEPA and MODNR-DEQ to cause this company to mend its ways. However, such lack has long been the custom and culture of the agencies when responding to violations of law by this company. I have enclosed a copy of our 1997 study of the records of MODNR-DEQ (with an update in 2000) that documents the lack of response. The agencies have done an excellent job of noting polluting events, but a lousy one of enforcement and prevention.

The Administrative Order of Consent represents a failure of responsible government agencies to protect the interests of citizens.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Midkiff", with a stylized flourish extending from the end.

Ken Midkiff

CC: Governor Bob Holden (Patrick Lynn)  
US Representative Richard Gephardt (Chuck Banks)

Encl: Non-Compliance studies



## *Ozark Chapter / Sierra Club*

Ken Midkiff, Director  
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### **UPDATE OF THE ENVIRONMENTAL NON-COMPLIANCE RECORDS OF MISSOURI LEAD MINING OPERATIONS.**

For Release Nov. 30, 2000.

On June 11, 1997, the Ozark Chapter of the Sierra Club issued a report entitled "Missouri's Lead Mining Companies and Environmental Non-Compliance", which documented a long history of violations of environmental, public health, and worker safety laws. In that document, we made this statement: "All indication were that these companies had long been the worst polluters and environmental law violators in the state, and the official records confirmed those indications."

On September 25 and 26, 2000, the Chapter Administrative Assistant, Terri Folsom, conducted a search of the files of the Southeast Regional Office of the Missouri Department of Natural Resources pertaining to the Doe Run Mining Company (ASARCO sold its lead mining operations to Doe Run and that company has taken over all of those facilities). This effort was undertaken to update our records and to determine if Doe Run had made improvements to comply with environmental laws and regulations.

The following pages outline the **significant findings** in the official records of the state environmental regulatory agency\*. While we had anticipated continued problems, we had also expected to find improvements in environmental compliance. Instead we were surprised to learn that, if anything, the Doe Run Company has gotten worse.

The Company continues to receive Notices of Violation on water quality, Notices of Excessive Emissions on air quality, Letters of Warning on hazardous, and violations of the Safe Drinking Water Act. (We did not look for, and consequently did not find, any citations pertaining to worker safety, as such records reside with the Occupational Safety and Health Administration, not MoDNR).

Based on this update, we see no reason to amend our earlier statement. **The Doe Run Company remains unchallenged as the worst polluter in the state.** We can only wonder how much longer the MoDNR will continue to issue notices of violations without taking aggressive actions to stop this company from fouling the air and water, and degrading public health.

  
Ken Midkiff  
Director, Missouri Sierra Club

\* - Copies of these records are on file at the Ozark Chapter offices. Note that the summary is not an exhaustive compilation, but only includes what we deemed to be significant entries. Other documents likely are on file with the US Environmental Protection Agency, Region VII - but we did not ask for access to those files.

## GLOSSARY OF ABBREVIATIONS

<b>AGO</b>	Attorney General's Office, State of Missouri
<b>APCP</b>	Air Pollution Control Program, DNR
<b>ASARCO</b>	American Smelting and Refining Company (includes following facilities: Glover Smelter, West Fork Mine/Mill, and Sweetwater Mine/Mill)
<b>BC</b>	Brushy Creek Mine/Mill, Doe Run Co.
<b>BM</b>	Buick Mine/Mill
<b>BS</b>	Buick Smelter
<b>BOD</b>	Biological Oxygen Demand
<b>DOH</b>	Department of Health
<b>DMR</b>	Discharge Monitoring Report
<b>DNR</b>	Department of Natural Resources
<b>DRC</b>	Doe Run Company (includes following facilities: Buick Mine/Mill and Smelter, Fletcher Mine/Mill, Brushy Creek Mine/Mill, Herculaneum Smelter, and Viburnum Mines #28, #29, and #35 (Casteel))
<b>EIQ</b>	Emissions Inventory Questionnaire
<b>EPA</b>	Environmental Protection Agency
<b>FM</b>	Fletcher Mine/Mill, Doe Run Co.
<b>GS</b>	Glover Smelter, ASARCO
<b>HS</b>	Herculaneum Smelter, Doe Run Co.
<b>HWMP</b>	Hazardous Waste Management Program, DNR
<b>LOW</b>	Letter of Warning
<b>M/M</b>	Mine/Mill
<b>MACC</b>	Missouri Air Conservation Commission, DNR
<b>MCWC</b>	Missouri Clean Water Commission, DNR
<b>NAAQS</b>	National Ambient Air Quality Standard
<b>NPDES</b>	National Pollution Discharge Elimination System
<b>NFR</b>	Non-Filterable Residue
<b>NOV</b>	Notice of Violation
<b>PDWP</b>	Public Drinking Water Program, DNR
<b>PER</b>	Performance Evaluation Report
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>SERO</b>	Southeast Regional Office, DNR
<b>SIP</b>	State Implementation Plan
<b>SNC</b>	Significant Non-compliance
<b>SW</b>	Sweetwater Mine, ASARCO
<b>TNTC</b>	Too Numerous To Count (bacteria)
<b>TSS</b>	Total Suspended Solids
<b>USOSHA</b>	United States Occupational Safety and Health Administration
<b>WET</b>	Whole Effluent Toxicity
<b>WF</b>	West Fork Mine, ASARCO
<b>WPCP</b>	Water Pollution Control Program, DNR
<b>WWTF/P</b>	Wastewater treatment facility or plant

NOTE: The Doe Run Company purchased all of ASARCO's holdings in Missouri. The above-listed ASARCO facilities are now owned and operated by the Doe Run Company.

Follow- Up on Missouri's Lead Mining Companies and Environmental Non-Compliance  
June, 1997 through September, 2000

- 9-9-96 Letter from EPA Region VII granting Doe Run Company- Buick Facility a one year extension to the compliance date of December 23, 1997 for complying with the National Emission for Hazardous Air Pollutants from Secondary Lead Smelters. More specifically from the "fugitive dust" requirements.
- 10-11-96 NOV 4481 HWMP issued to GS: 1. Failure to determine if waste is hazardous. 2. Failure to utilize an authorized Hazardous waste or Resource Recovery Facility. 3. Facility operated as a treatment, storage and/or disposal facility. 4. Failed to keep containers closed in storage. 5. Failed to clearly mark containers of hazardous waste. 6. Failed to package/label/mark per DOT during entire on-site storage period. 7. Facility operated and maintained to minimize the possibility of an emergency. 8. Failed to include hazardous waste transporter license number on manifest. 9. Failed to include designated facilities Missouri identification number on manifest. 10. Failed to sign and date (facility receiving) manifest. 11. Containers are not in good condition (used oil). 12. Containers of used oil leaking. 13. Containers/tanks which are exposed to rainfall were not closed. This NOV is based on the October 11, 1996 and August 13, 1997 inspections of the GS.
- 12-2-96 Letter from DNR to DRC concerning October 29, 1996 inspection of the treatment facilities at the Casteel Mine. Compliance Status: "The DRC is currently operating under the guidance of an expired NPDES permit."
- 1-6-97 NOV 17273 WPCP issued to GS: During the month of November, 1996, GS unit failed to comply with the effluent limits for outfall 001. The following violations were detected in a sample collected 11-26-96 - Unacceptable parameters of pH, TSS, lead, zinc and cadmium.
- 2-21-97 Letter from DNR APCP to DRC granting DRC - Viburnum request for 30-day extension to submit 1994 and 1995 Emissions Inventory Questionnaires.
- 5-13-97 APCP Source Inspection "Facility Not in Compliance": the Slag treatment system permit 0297-015, construction complete, permit under appeal, records not currently being kept at the Buick Smelter.
- 5-13-97 NOV/EXCESS EMISSIONS #2185 - Buick Smelter: Restriction of Emission of visible air contaminants. Comments: Door on roof of silo appears to be left open and bag house bypassed.
- 5-21-97 Letter from DNP WPCP to DRC concerning May 21, 1997 inspection of Buick Mine. Compliance Status: DRC is currently operating under the guidance of an expired NPDES permit. Discharge limits for zinc have been occasionally exceeded at outfall 002. DRC has entered a settlement agreement to resolve all exceedances concerning this outfall. During the inspection, a small amount of oily water was viewed outside the containment area of the petroleum storage area.
- 6-5-97 Letter from DRC to Mo DNR re: Research Development and Demonstration Permit Application that would allow DRC to process metal contaminated soil at its resource recovery operations and proposed soil processing facility in Boss, MO and complete a cleanup of materials that are now at two locations in California.
- /

- 6-18-97 Letter from DRC-Herculaneum to MDNR WPCP reporting that excessively heavy rain occurred and the DRC collection system could not handle the volume of stormwater. Water began to flood the kettle basements so stormwater was diverted through outfall 1. Samples were taken and are being analyzed.
- 6-18-97 Air Pollution Source Inspection DRC Herculaneum. Under "Comments" section -  
\*Note - "Although facility has complied with SIP and no violations were cited on the inspection date, the DRC Herculaneum is not in compliance with the National Ambient Air Quality Standard for Lead. Efforts are being made to achieve compliance".
- 7-22-97 Letter from MDNR WPCP to DRC. "During a site survey at Buick Smelter on 5/21/97, I noted that stormwater runoff and possible washwater from the battery acid plant entered the existing domestic treatment facilities....This does not comply with conditions in the schedule of compliance which requires separate treatment facilities for domestic wastewater."
- 8-13-97 NOV 4481 HWMP issued jointly with 10-11-96 inspection and violations to DRC Glover Smelter
- 8-18-97 Letter from MDNR PDWP to DRC re: inspections of the nontransient noncommunity public drinking water supplies serving DRC Viburnum No. 35 and DRC Viburnum No. 29.  
DRC Viburnum No. 35 unsatisfactory feature was "A leak was observed at the point of attachment between the check valve and the discharge pipe".  
DRC Viburnum No. 29 unsatisfactory feature was "The plastic detention tank for the hypochlorinator was partially buried".
- 10-1-97 Letter from USEPA- Washington, DC office to Randy Moore, Supervisor MTNF re: the location of suspected sulfur dioxide foliar injury in trees located in the MTNF which is 1.5 miles east of the ASARCO (DRC) Glover Smelter...."We estimate that several hundred acres of trees have been affected in the vicinity of the smelter".
- 10-31-97 MDNR-WPCP email from Jeff Killelea to Jim Huck, re: The 40 acre slag pile in the waste management area(WMA) at Herculaneum does not have any kind of water control berm, embankment or collection ponds in place to divert and sample the storm water runoff from the WMA. Also, some of the groundwater monitoring wells located in the flood plain next to the WMA are surrounded by a few inches of standing water.
- 11-5-97 Missouri Hazardous Waste Management Law Compliance Inspection report for the 8-14-97 inspection of the ASARCO West Fork Unit. Under "Comments" - #2" Mr. Aaron Miller told the inspector that the hazardous waste manifests from the Sweetwater and West Fork Units were managed from the ASARCO Glover Smelter. If the ASARCO West Fork Unit has shipped hazardous waste from EPA ID number of the Glover facility, they shall stop this activity immediately."
- 11-6-97 NOV 4483. is referenced in a 6/8/98 letter from DRC to MDNR HWP concerning October, 1996 and August, 1997 inspections at ASARCO Glover facility. No further information was found in the files.
- 12-23-97 Letter from DRC-Buick Facility to MDNR HWP re: Resource Recovery Certificate Application. Comment 1. "With respect to the RAC for lead, the 0.09

ug/m3 baseline is less than that of the background lead level for this area as calculated by MDNR - Air Lead SIP Group in 1993. Simple put, irrespective of Doe Run's impact, the background level for this area (0.15 ug/m3) already exceeds this RAC level".

- 2-23-98 Letter re: The 2-3-98 inspection of the non-community public drinking water supply serving DRC - Buick Smelter. The facility is in compliance with the following comments: 1. We recommend that flow meter reading be recorded on a daily basis... and be recorded on permanent file". 2. The distribution system pipes and valves are rusty. 3. The vent line should be at least 18 inches above ground, terminate in a down turned position, and covered with a 24-mesh corrosion resistant screen".
- 3-2 and 3-3-98 Samples collected for Acute Toxicity Test (WPCP) on DRC Buick Mine/Mill. Abstract concluded that "Acute Toxicity was observed for this effluent".
- 3-5-98 Letter from MDNR WRCP to DRC re: 2-10-98 inspection of the Herculanum Smelter wastewater treatment plant. "It has recently come to our attention that the storm water discharge from the slag storage area located in the oxbow of Joachim Creek south of your facility is not covered in NPDES permit MO-0000281".
- 3-6-98 Letter from MDNR to DRC ASARCO SweetWater, Inc., re: 3-5-98 inspection of the non-community public water supply. The facility was in compliance however a few items need to be brought to DRC's attention: 1. The supply does not have a proper sampling tap. 2. The well is not equipped with a means of measuring flow. 3. The distribution system valve was dripping and rusty. 4. Provisions shall be made for venting the well casing to the atmosphere.
- 3-16-98 Letter of Warning #98-01-012. Hazardous Waste Compliance Evaluation Inspection Report for DRC Buick Facility 12-10-97. Unsatisfactory features: 1. DRC was storing containers of lead-bearing materials and wastes containing free draining liquids within the Palletized Storage area. 2. Failures to mark and label containers storing hazardous wastes. 3. Failure to date each container storing hazardous waste with the accumulation start date, 4. Failure by DRC to store hazardous wastes in containers that are in good condition. 5. Failure to determine if solid wastes generated by DRC are hazardous. 6. Failure to note a significant discrepancy on a manifest. 7. DRC was open burning hazardous wastes and other lead-bearing materials in an unpermitted unit.
- 3-17-98 Letter from MDNR to DRC re: The 3-13-98 inspection on the non-community public water supply serving Doe Run - Fletcher. The facility was in compliance with the following items to be brought to their attention: 1. The distribution system pipes and valves were rusty. 2. A new colorimeter needs to be purchased that uses DPD.
- 3-23-98 Letter from MDNR to DRC re: The 3-13-98 inspection of the non-community public drinking water supply serving Doe Run - Buick Mine/Mill. The facility is in compliance with the following items to be brought to your attention: 1. A new colorimeter needs to be purchased that uses DPD. 2. The over flow pipe on the storage tank is buried under ground and extended over to a creek.
- 4-2-98 Letter from MDNR-WPCP to DRC re: Acute Toxicity Tests from 3/2/98/ and

- 3/3/98 samples.(Buick Mine/mill) "It is imperative that the DRC implement the recommendations contained in the report (of the Compliance Biomonitoring Inspection by Bruce Littell) and find the source of the toxicity to the Ceriodaphnia dubia[fish]"
- 4-13-98 Letter from DRC to DNR WPCP objecting to the addition of 60 water bodies being added to the 303(d) Waters list.
- 4-20-98 Calendar Year 1999 Annual Noncompliance Report Worksheet re DRC Viburnum Quarry I. Noncompliance Category - Missing or incomplete DMRs. Date noncompliance began 9/30/99. DRC was called by DNR 4/20/00. Results were furnished by DRC 4/24/00.
- 4-23-98 Letter from MDNR HWP to DRC certifying DRC - Buick Resource and Recovery Facility to reclaim spent lead acid batteries and other wastes subject to certain conditions.
- 4-24-98 Letter from MDNR to DRC re: 4/20/98 inspection of the non-community public water supply serving DRC - Brushy Creek. Facility was in compliance with the following items for attention: 1. The well is not equipped with a casing vent. 2. The pump discharge on the well was not equipped with an operable check valve. 3. The free chlorine residual in the system were greater than 3.5 ppm.
- 6-8-98 Letter from ASARCO to MDNR HWP responding to Settlement Communications and civil penalties in respect to NOV #4481 and #4483. (Glover facility)
- 6-10-98 Letter from DRC to MDNR HWP re: PWS ID MO4180655; Viburnum #3: Notice(s) of Non-Compliance. Notice could not be located in DNR files.
- 6-18-98 Letter from MDNR WPCP to DRC - Buick Smelter re: 6/10/98 inspection. "Acute toxicity to ceriodaphnia dubia by the discharge from outfall 001 still appears to be significant".
- 6-26-98 Letter from MDNR HWP Enforcement Section to ASARCO re: ASARCO's proposed payment of \$9,500 for Glover Smelter violations. This offer is not acceptable.
- 6-26-98 Letter from ASARCO to MDNR HWP re: Civil Penalty Assessment - Glover facility. "Asarco disagrees with MDNR's characterization of alleged violations. Nonetheless, in order to avoid the time and expense of litigation... Asarco will agree to pay the proposed civil penalty of \$16,600 in full settlement of this matter".
- 6-28-98 Letter from Wm. G. Huffman Engineering to DRC Buick Facility. re: the annual HW inspection of the Barrety Bunker, Paste Storage Bunker, and Rotary Melter Bunker. "In general, the areas which have the new acid brick system are in excellent condition and the *remaining areas are still in need of repairs*".
- 7-29-98 Letter from DRC-Buick Facility to MDNR-SERO re: written notification for stormwater overflow collection tank (Outfall 003) and Impoundment E (Outfall 002). Samples were collected.
- 8-4-98 Residential complaint regarding smelter activities in Herculanum, MO referred to the Superfund from MDNR SERO( HWP files.) According to the caller, "DRC hired a landscaping company to conduct soil removal in her yard. The workers do not wear protective covering and they do not place a cover over the trucks filled with contaminated soil before they drive away. DRC also contracts with a realty company to handle rental property in Herculanum that DRC owns. According to

- her, the realty company will no longer allow families with small children to rent homes like hers. The resident is concerned about her children and wonders why she was allowed to rent there”.
- 8-11-98 Letter from AGO to ASARCO .Settlement Agreement between MDNR and ASARCO regarding the State’s claim of violations of the Missouri Hazardous Waste Law and Regulations at the ASARCO Glover Primary Lead Smelter and the ASARCO Sweetwater Unit. The agreement concerns the violations listed in the NOV’ #4481 and #4483.
- 8-12-98 MDNR-WPCP Email from Valerie Wilder to Julie Warren and Gary Behrns re: Herculanum Smelter - Superfund Activities Update. “There is currently one NPDES permit for DRC to discharge into Mississippi and another permit application that has been or is soon to be received for discharge into Joachim Creek. The data the US Fish & Wildlife Services presented us with a few weeks ago seems to indicate harmful affects[sic] to wildlife in the area (fish, birds and mice)”.
- 8-12-98 Letter from MDNR HWP to DRC re”: DRC response to the Unsatisfactory Features to LOW #98-01-011 at the Buick Facility. “In regard to your response to Unsatisfactory Features 2 and 4, it is the MDNR’s intention that the US DOT requirements covering marking, labeling and packaging of wastes in containers apply during the **entire storage period** at the facility”.
- 8-18-98 Letter from MDNR HWP to ASARCO re: Site Assessment and Investigation Report Asarco Glover Lead Facility. “This letter serves as formal notice that the MDNR HWP has reviewed the Draft SAI Report and has determined that the data presented therein does not fully define the nature and full extent of releases from all source areas identified at the facility ...”
- 9-15-98 MDNR email from Jim Huck to Richard George re: DRC Herculanum Smelter slag pile. “Briefly, they have a slag pile in an oxbow of the Joachim Creek. The storm water which falls on the slag pile discharges into Joachim Creek in the vicinity of the discharge from the City of Herculanum WWTP”.
- 9-19-98 LOW #98-03-007 covering HWP inspections at the DRC - Buick Facility on 4/1-2/98 and 6/23-25/98. Comments, April 1-2 Inspection: 1. Re: In the palletized Storage area, the inspector observed 25 metal tote containers...containing crushed tank batteries. None of the containers were dated, labeled or marked. None of the containers were closed and observed waste material on the floor beside the containers. 2. Six 55 gallon drums of hazardous wastes were not in good condition. Three of these drums had small holes in their sides. In addition, in the east parking lot storage area, the inspector observed two cardboard boxes containing hazardous wastes being stored on a flat bed trailer. The integrity of these boxes appeared questionable. Comments, June 23-25 Inspection: 5. During the inspection, the inspector observed that post and grid material from the battery processing line were being deposited on the floor of a bunker locate on the lower level on the west side of the BDC building. 6. During the inspection, the inspector observed two small spills of what appeared to be lead-bearing materials on the ground in the trailer parking lot.
- 9-29-98 WPCP Inspection DRC - Herculanum. Facility is discharging without a permit.

- Facility NOT in Compliance.
- 10-20-98 Air Pollution Source Inspection DRC Herculaneum. Facility in Compliance with the following comments: Small leakage prior to EP 20 was noticed. Repair scheduled for 10-21-98.
- 11-4-98 Water Quality Standards Review Sheet. Facility DRC Herculaneum Smelter. Receiving Stream Uses: Mississippi River: Livestock, wildlife watering, aquatic-life protection, drinking water supply, boating, industrial. Joachim Creek: Livestock, wildlife watering, aquatic-life protection (general warm-water fishery), boating, whole-body contact recreation, industrial. Outfall 004: Storm water from the 25-acre slag pile is expected to continue discharging into the Joachim Creek indefinitely following rainfall events. For this reason, "chronic" (long-term-exposure) metals' limits are proposed as monthly averages, as well as "acute" (short-term-exposure) daily maximum limits commonly used for storm-water discharges.
- 11-5-98 MDNR-WPCP email from Jim Huck to Richard George re: DRC Herculaneum Smelter slag pile. "The US Fish & Wildlife noted a pipe (?) Which was discharging into Joachim Creek, which they sampled. It came back high in Lead".
- 11-5-98 MDNR-WPCP email from John Ford to Richard George, Jim Huck, John Madras and Richard Laux. Re: DRC Herculaneum slag pile. "...the stormwater from the whole Herculaneum area is likely to be quite elevated in heavy metals."
- 11-6-98 Letter from MDNR HWP to DRC - Buick Resource Recovery Facility. RE: DRC -Buick Resource Recovery Certification, Closure plan and Financial Assurance for Blast Furnace, RR#0344, Classification R2. "The MDNR HWP Section has recently become aware of an inconsistency in the closure plan for your facility i.e., the blast furnace should have been a part of the closure plan in the RRC application."
- 12-4-98 Letter from DRC Herculaneum Smelting facility to MDNR WPCP. A 11/28/98 pH sample was analyzed at 10.62. All flow was diverted back into the plant water. A 11/30/98 pH sample was analyzed at 10.78. All flow was diverted back into the plant. On inspection, the pH control system was found to be in need of correction and was subsequently calibrated. Further review reveal that a shielded cable used in the pH control monitoring system was receiving electrical interference. A new control box and a new pH probe was installed.
- 12-8-98 Letter from MDNR-WPCP to Barr Engineering Company re: Preliminary Engineering Report Review Higdon Mine- The DRC. Geologic Evaluations: Dry Branch, the receiving creek, has been reclassified as a losing stream. This will result in special construction requirements, very tight discharge limits, disinfection requirements and possible groundwater monitoring. Dewatering Pond Discharge Limits: A level of 55 ug/L for Bis-2(hexyethyl)phthalate is reported in the permit application. This exceeds the 6 ug/L limit established for the human health - fish consumption criterion!. The results of gross alpha and radium testing on groundwater, submitted with your engineering report, appear to be more than one-fifth of the anticipated discharge limits.
- 12-28-98 Complaint to MDNR APCP on DRC- Buick Resource Recycling Facility. "DRC put in air shaft above their property and did not maintain. During heavy rain clay

- washed down over them and damaged springhouse; pipes are exposed, retaining wall collapsed. They did repair yard but then put up old tin & fill dirt collapsed. Mold is growing in house and cleanup company tells her water table has probably dropped allowing water to stand under house. Will need to call first so husband can show you under house and air shaft. Believes they are mining underneath their property". DNR advised her that this was a civil matter between her and the company. No violation issued. No further action taken.
- 1-7-99 Letter from DRC-Buick Facility to MDNR-HWP re: RR#0344 Closure Plan and Financial Assurance. "...DRC did not concur with the Agency's interpretation that drossing kettles are part of the resource recovery process and therefore subject to the facility's resource recovery plan and financial assurance requirements. ...DRC would be willing to incorporate the "burn Kettle" as part of the resource recovery permit...Beyond that, the kettles in the facility are not used for processing hazardous waste and would not be subject to the closure plan and financial assurance provisions".
- 1-21-99 Letter from DRC-Buick Facility to MDNR-SERO-WPCP re: Closure of domestic lagoon.  
DRC is requesting an extension of the construction permit SE04-01125 from 3/17/99 to 8/1/2000 because the close will require RCRA permit modification.
- 2-17 & 2-18-99 Air Pollution Source Inspection DRC- Buick Smelter. Facility not in Compliance. Failure to comply with 10 CSR-6.075 Maximum Achievable Control Technology regulations was observed. Exceed 40 CFR 63.543 Standards and fugitives not controlled per 40 CFR 63.544. NOV/Excess Emissions No.2333. Given because of above-inspection. Buick Smelter Facility not in Compliance.
- 2-18-99 Letter from MDNR HWP to US EPA Region VII Superfund Division.  
Re: Viburnum Trend Lead Mining Haul Roads site. The HWP Site Evaluation Unit has completed a Second Pre-CERCLIS Site Screening(SS) Report for the MoDOT State Route 49 site. The site is the location of a previous sampling event conducted by MoDOT as part of a lead study in which unexpectedly high levels of lead were detected in soil on the shoulder of the road....The site is recommended for entry into CERCLIS".
- 3-31-99 Letter from MDNR HWP to US EPA Region VII Superfund Division re:  
Herculaneum Smelter and various Pre-CERCLIS Site Screening Reports. Based on available information the following sites are potential candidates for the National Priorities List(NPL): Herculaneum Smelter site, Crystal City Dump, Former Hulett Lagoon and the Camdenton Sludge Disposal site warrants further investigation under CERCLA..
- 4-16-99 MDNR-WPCP email forwarded from Gary Gaines Re: DRC Herculaneum Smelter. "In the last week we have learned that EPA Region VII water personnel and EPA Headquarters personnel are contemplating sending DRC a Unilateral Order to take action regarding the slag pile in the floodplain of Joachim Creek" based on the US FWS Draft Preliminary Screening Level Ecological Risk Assessment Report for Habitats around the DRC Lead Smelter in Herculaneum.
- 4-21-99 LOW #99-02-001. From MDNR-HWP to DRC - Buick Facility based on 1/20 & 21/99 inspection. Unsatisfactory Features: 1. Failure to notify the department of a

- major change in the facility's resource recovery process. 2. Failure to include resource recovery units in the facility's resource recovery closure plan and closure cost estimates. 3. Failure to provide adequate financial assurance to cover closure costs for resource recovery units at the facility. 4. Failure to properly operate a hazardous waste management facility.
- 6-2-99 MDNR-WPCP email from James Vaughn to John Hill re: DRC Higdon Mine. "Peter Price has recently made additional observations of Dry Branch which mostly support my October, 1998 reclassification to losing".
- 6-4-99 Letter from DAMES & Moore to DRC re:HW- Comments on Preliminary Assessment Report for Herculaneum Lead Smelter Site. Summary and Conclusions: "While we do not know if the USFWS is comfortable with the use of their report in this manner, we believe that a preliminary screening assessment should **not** be used as a basis for the type of recommendation. The USFWS report uses maximum concentrations whenever possible and is ultraconservative. By its nature, it lacks the fundamental scientific data that can establish a link between what is modeled or observed in a beaker and what is actually occurring at the site".
- 8-2-99 Letter from DRC Buick Facility to MDNR APCP re: Compliance Notification Status - 40 CFR 63.9 (h). "... DRC is currently in the process of relocating the THC CEM unit to ensure blast furnace THC emissions are monitored accordingly...Measurements taken to date, demonstrate compliance with the standard approximately 75% of the monitored time".
- 8-5-99 Letter from DRC Buick - Resource Recycling Division to MDNR APCP Re: A projected timeline which will address process fugitive ventilation and THC's. This is a preliminary timeline but can be the basis for structuring a settlement agreement with MDNR.
- 8-9-99 Joint Motion for Modification of Consent Decree in State of Missouri vs. ASARCO, Inc, Missouri Lead Division(Glover Facility) In the Consent Decree ASARCO agreed to construct and implement certain control strategies, which control strategies designed to attain the federal and Missouri Ambient Air Quality Standard for Lead.  
DRC purchased ASARCO and since some items in the original decree were completed by ASARCO, this Modified Decree specified the projects that DRC needed to continue.
- 8-12-99 Letter from MDNR Division of Geology and Land Survey(GLS) to DRC re: Higdon Mine Receiving Stream. "Observations made on May 18 and June 8 support the October 19, 1998 determination that Dry Branch is losing for approximately one-half mile below the mine access road".
- 8-18-99 Letter from DRC to MDNR SERO HWP re: notification that one or more than one liter of liquid is present in the leak detection system for the Breaking/Desulfurization/Crystallization (BDC) building at the Buick Facility.
- 8-28 & 29-99 NOV 5540 DRC Buick Resource Recovery Facility. Re: HWP Inspection dates September 28-29, 1999. 1. Failure to give notice to Director of any planned alteration or additions to the permitted facility. 2. Failure to close satellite accumulation containers. 3. Thermal treatment of nonexempt hazardous wastes which have greater than 5,000 Btu per pound in conditionally exempt BIF units.

- In addition, there were 11 Comments.
- 8-31-99 Letter from MDNR, WPCP to Timothy Skoglund, Vice President Barr Engineering Company RE: Final Engineering Report Review Higdon Mine DRC. "Peter Price MDNR GLS maintains that additional data is needed to support a gaining stream determination for the section of Dry Branch that will receive the discharge from the proposed sewage lagoon". Also: "Regarding the possible sampling error for the Bis-2(hexylethyl)phthalate, I suggest a resample rather than trying to remove a parameter from an NPDES operating permit after it is issued".
- 10-99 Many MDNR-WPCP emails concerning the Glover Smelter and whether or not their current permit adequately addresses the opening of their "new" slag disposal area at the smelter. It was stated in an 11/23/99 email from John Hill that they do not need a modification to accommodate the proposed slag pile nor does DRC need a construction permit since they are not treating runoff from the existing or new slag piles.
- 11-3-99 Letter from MDNR HWP to DRC Herculanum re: Certification of the DRC Herculanum Smelting Division to process and recover lead values [sic] (VALVES??) from D008 and K069 hazardous wastes in the sinter plant.
- 11-8-99 Letter from MDNR HWP to DRC- Resource Recycling Division-Buick Facility. An Operation and Maintenance (O&M) concerning groundwater monitoring at this Facility has been prepared. "This letter serves as notice that groundwater monitoring deficiencies do exist at Doe Run in Boss, Missouri".
- 11-15-99 A Petition was filed by Enos Green vs. the Doe Run Resources Corporation "...seeking redress from the Defendants for damages suffered by the Plaintiff as a result of dumping hazardous materials onto Plaintiff's property".
- 12-3-99 LOW #99-04-004 From MDNR HWP to DRC-Buick Facility re: September 28-29 inspection. To return to facility to compliance, a written response to the Unsatisfactory Features and Comments must be submitted to MDNR within 30 days.
- 12-21-99 Letter from DRC, Herculanum to MDNR HWP re: Viburnum Trailer Court. This letter provided some background information on DRC involvement with cleanup activities at the Viburnum Trailer Court. 4/30/99 DRC received a phone call from Robert Royle of St. Francois County Health Department concerning a site in Viburnum that had high lead levels in the driveway. 5/11/99 DRC received another call from St. Francois Co. HD to advise them that a child with an elevated blood lead no longer lived at the residence in question. DRC proceeded to remove "old" rock in the driveways of the trailer court.
- 12-21-99 Letter from DRC to MDNR WPCP re: Follow-up report to notification call made on 12/9/99 concerning process wastewater spill to land. 1. The chemicals involved - arsenic, cadmium, copper, lead, thallium and zinc. 2. The metals are not believed to be an extremely hazardous substance. All metals are believed to be present as a metal sulfide or sulfate. 5. The release was to land owned and controlled within the properties of the DRC. 10. We do not anticipate any acute or chronic health risk associated with the release.
- 1-4-00 Letter from DRC to MDNR HWP re: LOW #99-04-004. DRC comments and

- responses to Unsatisfactory Features at Buick Smelter and Comments.
- 1-12-00 Letter from DRC to MDNR GLS re: DRC attempts to support Dry Branch as a gaining stream to try and obtain a NPDES permit for the Higdon Mine as soon as possible. They drilled piezometers to attempt to change this classification.
- 1-17-00 Another letter from DRC to MDNR WPCP re: Higdon Project; Gaining/Losing Stream Determination. This time they have installed monitoring wells to support their original contention that the Dry Branch is not a losing stream.
- 2-10-00 LOW #00-01-006 to DRC - Buick Facility re: Hazardous Waste Compliance Evaluation Inspection Report for 12/28/99 inspection. Unsatisfactory Features: 1. Thermal treatment of nonexempt hazardous wastes, which has greater than 5,000 Btu per pound, in conditionally exempt BIF units. Additional 8 comments.
- 2-19-00 Letter from DRC to MDNR Geological Survey Program re: Higdon Groundwater Monitoring Wells. "Getting the discharge permit for this facility is a priority for DRC. We therefore ask that you expedite your decision as to whether to reclassify the receiving stream as a gaining or losing stream".
- 2-22-00 Letter from MDNR APCP to DRC Re: DRC Glover - Sulfur Dioxide Exceedance. "On January 18, 2000, the SO2 monitors at the DRC Glover Plant recorded a three-hour exceedance. Since this is the first exceedance of the calendar year, it does not constitute a violation".
- 3-22-00 LOW #00-01-008 to DRC - Buick Facility Re: DRC letter in response to NOV #5540 and LOW #99-04-004. Two more conditions exist that need to be agreed to before MDNR can consider DRC Buick Facility in compliance.
- 3-24-00 Settlement Agreement between DRC and MDNR APCP concerning violations of the DRC-Resource Recycling Division in Boss, MO. These violations included emissions of total hydrocarbons in excess of the limits and failure to control fugitive emissions.
- 3-28-00 Complaint referred from SERO-APCP re: strong sulfur odor from the DRC at Herculanum, MO. No odors were detected on inspection. Facility emits odors at times.
- 4-11-00 Level II State Source Inspection Form. Re: APCP Inspection of DRC Herculanum. Comments: "Facility working on new SIP. Facility in Compliance with state requirements but striving to meet Federal Ambient Air Requirement for lead. Facility has had specific non-compliance in that area with some exceedances over the past month".
- 4-12-00 Letter from DRC to MDNR HWP Re: LOW #99-04-004 (also LOW #00-01-008) On Unsatisfactory Feature #3 at the Buick Facility, DRC will have EPA provide their interpretation on this subject which has to do with the "Thermal Treatment of nonexempt hazardous wastes, which had greater than 5,000 Btu per pound in conditionally exempt BIF units.
- 4-19-00 MDNR-WPCP Facsimile Transmittal Sheet Re: Higdon NPDES pipeline question. "No discharge will be permitted from a sewage lagoon into the losing stream portion of Dry Branch. Alternatives include, but are not limited to, land application or piping of discharge to a gaining portion of the stream".
- 4-27-00 Email or fax from DRC to EPA Re: The spill of 6200 gallons of sulfuric acid into the river at Herculanum. WPCP-Herculanum.

- 5-11-00 Letter from DRC to MDNR /SERO WPCP Re: Higdon Mine Sanitary treatment system. "Your fax addresses our concern about the discharge from the sanitary treatment system. Would we have the same concern about discharge limits from the mine water treatment system? I would propose a combined discharge pipeline, carrying both treated sanitary wastewater and treated mine water away for the losing section of Dry Branch to the gaining system. Please advise if this is an appropriate approach"...
- 5-19-00 Letter from MDNR HW Enforcement Unit to Tod Leedburg, New Hampshire Dept. of Environmental Services. Re: Concern regarding the acceptance of crushed cathode ray tubes from computer monitors by the DRC primary lead smelter in Herculaneum and DRC Boss, MO. (From DMC Company in Newfields, New Hampshire) "Despite a record review, I can find No record of any such specific approval being made to either DMC or DRC". (See June 2, 2000 follow up letter.?)
- 6-7-00 Fax from Kelly Corley to Roy Hengerson and forwarded to Ken Midkiff Re: Proposed Drilling projects. "According to Barbara Walker, with the Forest Service, Proposal 1 will take place in the Wynona area out of the Rolla office. It is sponsored by Senator Bond and the 'Tech Team'. Proposal 2 will take place at the Big Spring sinkhole. The man conducting the research comes out of Restin, VA and is known as the US karst topography king."
- 6-12-00 Report of Inspection of the Wastewater Treatment Facilities at the DRC Viburnum Mine #35 (Casteel Mine). Facility is not in compliance with discharge limits for Total recoverable Lead, outfalls 001 and 003.
- 6-14-00 Report of the public water supply sanitary surveys conducted 5/11/00 at DRC Viburnum#35 (Casteel) Mine. Unsatisfactory Features: 1. Openings around the well head were not sealed properly. 2. The well casing was not properly vented. 3. Unsafe samples were taken in April and May, 1998 and January, 1999.
- 6-14-00 Report of the public water supply sanitary surveys conducted 5/11/00 at DRC West Fork Mine/Mill. Unsatisfactory Features: 1. As-built drawings for the new disinfection system may not have been submitted to department. 2. No records are being kept of daily chlorine residuals. 3. The well casing is not vented. This was also cited as an Unsatisfactory Feature in the last inspection. 4. An abandoned and apparently unplugged well was observed approximately 100 feet west of the active well. 5. The ground storage tank has not been inspected by a professional tank inspector in recent years. This was also listed as an unsatisfactory feature in the August 20, 1997 inspection. 6. A number of storage tank deficiencies were noticed.
- 7-3-00 Letter from MDNR HWP to Gary Gaines, SERO Director Re: Pre-CERCLIS Site Screening Report for the St. Joseph Trailer Court Site. "In December, 1999, DRC voluntarily removed and replaced the "old" gravel in all of the driveways of the trailer court....In January 2000, SS sampling was conducted; one sample from each trailer lot. Sampling results from 5 of the 42 lots documented lead levels above the EPA residential screening level of 400 ppm. Lead levels from 2 of the 5 lots exceeded 2,500 ppm".
- 7-12-00 Letter from DRC to MDNR APCP Re: Source Inspection Report, April 11, 2000

at the DRC Herculaneum plant. "...it has been DRC position and understanding that as long as we complied with the conditions of the State's SIP plan that we are in compliance".

7-31 and 8-1, 2000 NOV 5381 issued to DRC - Buick Facility for failure to meet conditions in Resource Recovery Certification based on Hazardous Waste Compliance Evaluation Inspection Report. DRC did not provide information on how they plan to comply with Maximum Achievable Control Technology standards and other air pollution control issues to the HWP.

8-24-00 Complaint filed on the water quality in the West Fork of the Black River being down. The water is blackened and rusty - the river bed is black below the lead mine and mill operation. The water above the mill and mine is clear. Investigation: All testing of effluent has been done and submitted. There is no exceedance of limits. The black stains on the rocks appear to be manganese stains. WPCP - West Fork Mine and Mill.



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# **MISSOURI'S LEAD MINING COMPANIES AND ENVIRONMENTAL NON- COMPLIANCE**

**A History of Pollution and Violations of State and Federal Laws and Standards by  
the Doe Run and Asarco Mining Companies.**

Compiled from the files of the Southeast Regional Office of the Missouri Department of  
Natural Resources by the staff of the Ozark Chapter of the Sierra Club.

**JUNE 11, 1997**

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*Osage Group*  
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*Trail of Tears Group*  
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*White River Group*  
Springfield

*Eastern Missouri Group*  
St. Louis

## **MISSOURI'S LEAD MINING COMPANIES AND ENVIRONMENTAL NON-COMPLIANCE**

### **A History of Pollution and Violation of State and Federal Laws and Standards**

Report issued June 11, 1997

#### ***-Background-***

The Doe Run and Asarco mining companies have within the past year advanced proposals to expand their operations, primarily on public lands. Both companies made application to the Missouri Conservation Commission to conduct mineral exploration activities on state lands in Shannon and Reynolds counties. Those applications were withdrawn shortly before the Commission was to have made "final disposition" of the requests at its meeting of May 30, 1997.

Doe Run currently has a pending request to the Mark Twain National Forest to conduct exploratory drilling operations on 7970 acres of federal lands in the vicinity of the Eleven Point River. The Forest Service has prepared an Environmental Assessment which addresses only the immediate environmental impacts of the exploratory drilling and does not take into account any impacts related to actual mining operations (which of course is the goal of exploratory drilling: to find minerals to extract).

During the debates and public hearings before the Conservation Commission, a spokesman for Doe Run made an extraordinary statement: "The lead mining companies in Missouri have never caused any environmental problems." Since we knew from the media, from official reports of the Missouri Department of Natural Resources and Missouri Department of Conservation, and from personal observation that this statement lacked a reality base, a staff member of the Ozark Chapter of the Sierra Club spent the better part of two weeks in the Southeast Regional Office of the Department of Natural Resources conducting a search of the compliance records of Doe Run and Asarco compiled by that agency.

#### ***-Search of DNR Records-***

This file search resulted in copying over 1500 pages of documents that detail inspection records, permit violations and exceedances, non-compliance reports, official Notices of Violations, Consent Decrees, settlement agreements, fines, penalties, and other official documents that reveal longstanding, continual and ongoing pollution of the air, water and lands around the facilities of the mining companies. While we expected to find problems and violations of the Clean Air Act and the Clean Water Act, we were surprised to find a number of problems related to compliance with the Safe Drinking

Water Act and the Resource Conservation and Recovery Act (hazardous waste).

The sheer volume of violations was not unexpected, however. All indications were that these companies had long been the worst polluters and environmental law violators in the state, and the official records confirmed those indications.

#### *-Other Reports-*

Lead mining companies have been in operation in Missouri for over a century, but our file search did not encompass the problems caused by mining activities in the past. The Superfund sites in southwest Missouri and in the "old lead belt" around Bonne Terre and Desloge are well-documented - and remediation attempts are under way. While the old practices of spreading tailings on roads, lawns and parks has been discontinued, the problem of "disposal" of tailings remains. The current practice is little evolved; but instead of great heaps and hills of tailings, the modern method is to create dams of the rubble across valleys and pump the tailings as a slurry into the lakes created. The problems of leachate into creeks and blowing tailings dust remain, as the tailings contain significant levels of finely-milled heavy metals, primarily lead, cadmium and zinc.

As we were completing our research on environmental violations, the Missouri Department of Health released its findings on health problems caused by the tailings in the "old lead belt". The essential finding was that the tailings are directly responsible for elevated levels of lead in persons living in the area of the facilities. Lead is a base metal and does not break down into less harmful components. Once in the body of a living organism, it causes a number of health problems, including reduced mental capacity and developmental disability in children. Research reports of fisheries biologists from the Missouri Department of Conservation demonstrated linkages between the presence of heavy metals in streams and reduced reproduction of aquatic species, including fish. (These reports are available from the agencies mentioned).

#### *-Limitations of our search-*

But, our investigation was limited to the examination of environmental compliance and enforcement records of the Division of Environmental Quality of the Department of Natural Resources of the CURRENT FACILITIES of the Doe Run and Asarco mining companies. The initial intent was to search back 10 years - to 1987, but references to consent decrees and violations prior to 1987 led to a cursory search for those documents in order to establish continuity and comprehensibility of the file search. Consequently, while the bulk of the documents we reviewed and copied are for the past ten years, there are references to older materials dating back to 1978.

It should be noted that we have made no attempt in the attached listing of the Records of Compliance to interpret, embellish, or modify the record. We have summarized - and if there is any problem with this report it is that in the interests of brevity we had to determine what to include and what to leave out. Consequently, the attached "Asarco Record of Compliance" and "Doe Run Record of Compliance" represent a sampling of the environmental history of these companies for the past ten years. There are many, many more inspection reports detailing minor ongoing problems that were not included, and there are various memos from MoDNR-DEQ personnel and from mining companies' officials that are not reported. The complete 1500 pages of documents on which the attached reports are based are available for inspection at the offices of the Ozark Chapter of the Sierra Club at 914 N. College, Suite 1, Columbia, Mo. Please call for an appointment to view these records.

It can easily be predicted that Asarco and Doe Run will claim that our compilation of their compliance/non-compliance files are "distorted, biased, and are taken out of context". To that we reply that their argument is with the Department of Natural Resources, not with us. All we have done is to review, compile and report what is contained in the official files of the governmental agency responsible for monitoring and enforcing compliance with state and federal environmental laws and regulations. These companies have spent years attempting to deny and refute DNR's inspection and compliance monitoring reports. Our compilation would suggest that these companies' efforts could be more properly directed to preventing pollution and to protecting human health from their emissions and discharges.

**We would urge a careful reading of the attached Records of Compliance. We feel confident in stating that no similar record could be compiled on any other industry in this state. The types of violations - and the nature of the substances released and emitted - are serious and major offenses to the public health and welfare and constitute a history of degradation of the air, water, and lands of the "new lead belt".**

*-A Comparison of the Companies-*

The first thing noticed is that the report on Doe Run is more than double that on Asarco. The primary reason is that Doe Run operates more facilities and therefore more records are compiled. The record of the two companies, aside from the number of facilities, is remarkably similar. Both have continuing and ongoing - and major - violations of the Clean Air Act. Both have caused pollution of Ozarks streams in the Black River watershed and other violations of the Clean Water Act. Both have had problems with proper storage and disposal of hazardous wastes. Both have even had violations of the

safe drinking water act - contaminating the drinking water of their own employees.

However, several personnel in MoDNR stated - with a request of anonymity - that they felt that Asarco was much more difficult to deal with when violations were found. It was felt by the compliance-monitoring and enforcement personnel that Doe Run officials were inclined to be more concerned and cooperative in dealing with their problems. It was noted that Asarco tended to "call in the lawyers" to deal with Notices of Violations and other compliance and enforcement activities, whereas Doe Run made at least perfunctory attempts to address the issue.

But, regardless of attitude, both companies have very poor records of compliance with environmental laws and standards. The first notation in the Asarco Record of Compliance is a quote from a 1978 MoDNR memo: "Asarco has been in violation of (Restriction of Emission of Sulfur Compounds) since 1968". The last notation is dated January 6, 1997 (no records were available beyond that date) and notes that "NOV 17273 issued to GS: effluent over permit limits for pH, TSS, Lead, Zinc and Cadmium (see 12-24-96)". [NOTE: "GS" is Glover Smelter, "pH" is acid limits, and "TSS" is Total Suspended Solids"].

The Doe Run report is similar, beginning with a notation of a 1984 Settlement Agreement and ending with a quote from a letter from Doe Run to the Water Pollution Control Program of MoDNR-DEQ proposing a settlement agreement in reference to pollution from discharges of zinc. The problems don't seem to get resolved; or resolution of longstanding problems are then replaced by new violations.

From the records, we are unable to confirm the feeling by MoDNR personnel that Asarco is more troublesome than Doe Run. Both of these companies seem unable or unwilling to comply on any kind of continuing basis with state and federal laws and standards. Entire communities have been harmed - both human health and property values have been degraded. Both companies have been the subject of lawsuits for such harm - and the suits continue. It is clear that these companies are indeed the worst polluters in the state - and that continues right up to the present time.

There is no indication from the records that either company has made any substantial commitments to improve their records. Both companies seem to act on environmental problems only when pushed to do so by MoDNR, US EPA or citizens suits.

The very statement that "Lead mining companies have never caused an environmental problem in Missouri" is symptomatic of the problem. Denial of the reality of years of documented problems does not bode well for the future of clean air, clean water, and land stewardship near the mining facilities. Smelters continue to spew heavy metals, mining wastewater continues to pollute streams, and hazardous waste continues to be dealt with haphazardly. All of this leads to the somewhat dismal conclusion that the

lead mining companies will continue to cause significant problems with the natural environment and with human health. Perhaps they do not see polluted creeks and poisoned humans as serious environmental problems, but we do.

#### *-Lead Mining and Public Lands-*

While environmental laws and standards make no distinction between operations on private and public lands, the citizens of this state and country expect our state and national forests, and state and national parks, to be protected to higher standards. These are lands owned and managed for the public good - and the state and federal lands targeted by the lead mining companies in the watersheds of the Current, Jacks Fork, and Eleven Point rivers are some of the most highly-valued natural areas in this state and indeed the Midwest.

While expansion of lead mining activities into any area of this state would be cause for concern given the past history and current practices of the two companies, the Scenic Riverways watersheds are arguably the most susceptible to harm. The geologic nature of the area - karst topography consisting of caves, springs, and other porous limestone/dolomitic features - combined with the pure, cold streams and heavily wooded and steep terrain contribute to an area that is superb in scenic beauty, rich in biological diversity, and provides a place for many types of outdoor recreation and unparalleled solitude.

It is no accident that this area contains a higher percentage of public lands than any other area of the state. The area has been deemed as unique, and in need of special protections, and agencies from the US Department of the Interior to the US Forest Service to our state resource agencies have all purchased or acquired large blocks of lands in the area.

It is also no accident that the lead mining companies have targeted the public lands for mining activities. While it would initially appear that the bureaucratic hurdles to acquire permission to conduct mining activities on state and federal lands would be sufficient to deter applications, there are very few landowners in the area that would grant permission for the mining companies to conduct operations on their lands. In addition, most private holdings in the Ozarks are small in nature - and simply do not provide the space for mining companies to conduct their operations. The mines, mills and smelters occupy a considerable amount of space, and tailings ponds may cover up to 600 or more acres. Consequently, only the comparatively large blocks of public lands provide the operating room for the mining facilities.

The mining companies also enjoy a considerable amount of support from local, state,

and congressional level politicians in the Ozarks area - as evidenced by the signatories of a letter to the Conservation Commission in support of allowing mineral exploration on state lands. While all the evidence indicates that mining does not benefit local economies, and in fact has the opposite effect, some people do in fact benefit financially. Those people are typically local business owners whose services will be needed to provide housing, equipment, and supplies for the mining companies and their employees. However, very few local jobs would be created: if the mining companies relocate their activities, their current employees would follow. It is highly unlikely that there are very many unemployed mining engineers or heavy equipment operators in Shannon County. But short-sighted politicians and local business leaders, who view public lands as a source for private profits and as a way to line their own pockets, have been acting as advocates for opening the public lands to lead mining activities.

*-Promise Anything-*

When public land management agencies - whether the Conservation Commission, the Forest Service, or the Bureau of Land Management - are contemplating applications for mining activities, the first response is to study the potential impacts and establish conditions on the activities that would minimize or eliminate those impacts. However, there is an invalid assumption in this response: that the mining companies will comply with the conditions.

As can be seen in the attached Records of Compliance, the mining companies do NOT comply with conditions of their permits. MoDNR issues permits to Asarco and Doe Run with very specific operating conditions, and very specific limitations on air emissions and wastewater discharges. Asarco and Doe Run almost never operate within those conditions and limits. Note in the Asarco Report (p. A8) that, on 12-24-96, Asarco was cited for exceeding lead limit discharges by 315450%, and zinc and cadmium discharges ranged from 924% to 23615% over the limits established by the permits - those are not typographical errors, but do constitute astronomical exceedances of permit conditions. As noted above, lead, cadmium and zinc are base elements and highly toxic to humans, and they do not become benign with time - the numbers on these substances represent polluting activities of the highest order.

The Missouri Department of Natural Resources has made valiant efforts to control and contain the polluting activities of these companies; the Attorney General's Office and the US Environmental Protection Agency have brought their considerable forces to bear. All for nought - the companies have always operated outside the legal limits of their permits, flaunting the laws of our state and nation, and they continue to do so. Fines and penalties are apparently viewed by Doe Run and Asarco as simply a normal operating expense. [NOTE: In 1992, MoDNR and the MoDept of Health had

negotiations about declaring Asarco's emissions as "a clear, present, and immediate danger" to public health, and issuing a "cease and desist order" followed by a court order to shut Asarco down in the event of continuing pollution. The Health Department, for what appears to be non-health reasons, did not issue the health warning, and no assertive action was taken. This information is contained in files in the DNR Directors Office.]

While the Forest Service or other public land management agencies may assume that their conditions are sufficient to protect the environment and human health, the demonstrated record of the mining companies is that they do not respect or comply with any conditions. Once their new operations are in place, they will no doubt operate in the same laissez faire manner as at their current operations.

The simple fact is that: DOE RUN AND ASARCO HAVE TRACK RECORDS THAT WOULD CAUSE ANY REASONABLE PERSON TO ASSUME THAT THESE COMPANIES HAVE CONSISTENTLY AND CONTINUALLY VIOLATED THE PUBLIC TRUST. There is absolutely no reason to assume that they will change their operating style, there is no reason to assume that they will be "good neighbors". From the beginning of their operations to the present day, they have contaminated the air, fouled the waters, and filled the lands around their facilities with materials that will remain a problem for generations to come. There is every reason to assume that no conditions, however strict, will be sufficiently complied with, or adequately enforced, to protect the environment and to protect human health.

The records of non-compliance of the mining companies is clear - these are renegade industries. Their legacy will remain for decades, perhaps centuries: abandoned communities and abandoned problems - pockets of poverty laced with poisons .

#### *-The Next Step-*

The only thing that will change this legacy is for the citizens of this state, their elected officials, and the resource management and enforcement agencies to call a halt to illegal activities: clean up or shut down. It is time to enforce the laws and to protect the environment and public health.

The Ozark Chapter of the Sierra Club urges those who read this report and who review the records of these companies to contact their state representatives, state senators, the Governor, the Attorney General's Office, and the Department of Natural Resources and urge them to take decisive action to force these companies to respect and obey the law. For too long, these companies have been operating to the detriment of the public good - without being subjected to scrutiny by elected officials.

It is hoped that the US Forest Service will recognize that the record of these companies makes them particularly unfit to conduct operations in areas that the public wants protected to higher standards, and we are making a copy of this report available to the Supervisor of the Mark Twain National Forest and to the District Ranger of the Doniphan/Eleven Point District. We would ask that requests from these companies for permission to conduct operations on national forest lands be treated as applications from chronic and habitual violators of state and federal laws - and summarily rejected.

**Large companies respond to strong laws - rigidly enforced - and to the glare of bad publicity. It is hoped that our compilation of the history of non-compliance will subject these companies to both of these.**

Finally, we wish to issue a warning to Doe Run and Asarco: we will be watching closely to ensure your future compliance with state and federal laws and standards. Your facilities and operations - and the air, waterbodies, and lands around the facilities - will henceforth be monitored by citizen volunteers and any observed violations will be reported to the MoDNR, the AG's Office, and the US EPA - and we will follow up to ensure that these agencies take assertive actions. Enough is enough.

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#### THE OZARK CHAPTER OF THE SIERRA CLUB

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## GLOSSARY OF ABBREVIATIONS

<b>AGO</b>	Attorney General's Office, State of Missouri
<b>APCP</b>	Air Pollution Control Program, DNR
<b>ASARCO</b>	American Smelting and Refining Company (includes following facilities: Glover Smelter, West Fork Mine/Mill, and Sweetwater Mine/Mill)
<b>BC</b>	Brushy Creek Mine/Mill, Doe Run Co.
<b>BM</b>	Buick Mine/Mill
<b>BS</b>	Buick Smelter
<b>BOD</b>	Biological Oxygen Demand
<b>DOH</b>	Department of Health
<b>DMR</b>	Discharge Monitoring Report
<b>DNR</b>	Department of Natural Resources
<b>DRC</b>	Doe Run Company (includes following facilities: Buick Mine/Mill and Smelter, Fletcher Mine/Mill, Brushy Creek Mine/Mill, Herculanum Smelter, and Viburnum Mines #28, #29, and #35 (Casteel))
<b>EIQ</b>	Emissions Inventory Questionnaire
<b>EPA</b>	Environmental Protection Agency
<b>FM</b>	Fletcher Mine/Mill, Doe Run Co.
<b>GS</b>	Glover Smelter, ASARCO
<b>HS</b>	Herculanum Smelter, Doe Run Co.
<b>HWMP</b>	Hazardous Waste Management Program, DNR
<b>LOW</b>	Letter of Warning
<b>M/M</b>	Mine/Mill
<b>MACC</b>	Missouri Air Conservation Commission, DNR
<b>MCWC</b>	Missouri Clean Water Commission, DNR
<b>NAAQS</b>	National Ambient Air Quality Standard
<b>NPDES</b>	National Pollution Discharge Elimination System
<b>NFR</b>	Non-Filterable Residue
<b>NOV</b>	Notice of Violation
<b>PDWP</b>	Public Drinking Water Program, DNR
<b>PER</b>	Performance Evaluation Report
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>SERO</b>	Southeast Regional Office, DNR
<b>SIP</b>	State Implementation Plan
<b>SNC</b>	Significant Non-compliance
<b>SW</b>	Sweetwater Mine, ASARCO
<b>TNTC</b>	Too Numerous To Count (bacteria)
<b>TSS</b>	Total Suspended Solids
<b>USOSHA</b>	United States Occupational Safety and Health Administration
<b>WET</b>	Whole Effluent Toxicity
<b>WF</b>	West Fork Mine, ASARCO
<b>WPCP</b>	Water Pollution Control Program, DNR
<b>WWTF/P</b>	Wastewater treatment facility or plant

# ASARCO RECORD OF COMPLIANCE

## Water, Air, Haz Waste, Drinking Water

- 4-10-78 DNR memo: variance recommendation for ASARCO
  - "ASARCO has been in violation of (Restriction of Emission of Sulfur Compounds) since their operation began in 1968."
- 4-82 APCP Consent Order against Glover Smelter (GS)
- 4-29-83 Compliance Monitoring Report of GS: wastewater facility discharging without a permit
- 8-29-85 Fish kill on Big Creek below GS; source of toxicity undetermined
- 5-6-87 Ozark Lead Company bought by ASARCO; Sweetwater (SW) unit formed, Bunker, MO
- 7-87 APCP Second Consent Order on ASARCO/GS compliance schedule
- 3-15-88 Report of Inspection (3-4-88) at GS
  - cited consent agreement between DNR and ASARCO which stipulated a specific lead emission reduction program
- 3-30-88 Report of Inspection at West Fork Mine/Mill (WF): NOV 000234
  - Primary crusher/scrubber that permit called for had not been installed
  - unpermitted wet scrubber
  - unpermitted secondary crusher
  - unpermitted baghouse
  - no permits for lime and concrete storage or for five underground storage tanks
- 3-30-88 Report of Inspection at SW: NOV 000238
  - baghouse units serving secondary and tertiary crushers were not being operated
  - current EIQ incomplete
  - air pollution control equipment was not being operated
- 3-30-88 Letter of Deficiency issued to GS by EPA
  - deficiencies related to monitoring location, sampling procedures, and recordkeeping
- 6-13-88 Letter to SW re: 3-30 inspection: inoperable equipment constitutes a violation of "Permits Required"
- 8-3-88 Letter to SW re: 6-13 Violation: APCP offer to settle for \$1000 and pledge from SW that equipment will run at all times
- 8-11-88 DNR letter to EPA: ASARCO using trees as a wind screen to reduce lead concentrations near roadways
- 9-21-88 Settlement agreement between SW and DNR re: 6-13 violation
  - \$500 fine to go to Reynolds County School Fund
- 7-19-89 Coliform tainted drinking water samples: SW (two locations)
- 8-22-89 TNTC with coliform tainted drinking water sample: SW
- 8-28-89 Coliform tainted drinking water sample: SW
- 8-29-89 Coliform tainted drinking water sample: SW

8-30-89 Coliform tainted drinking water sample: SW  
8-30-89 TNTC with coliform tainted drinking water sample: SW  
11-29-89 Joint Overview Inspection Report at GS by EPA  
- transmissometer on blast furnace stack out of service for over six months  
- current EIQ not available  
1-26-90 NOV issued to GS for failure to submit quarterly Excess Emission Report (EER) for past two years  
4-2-90 NOV 1586 issued to GS for excessive emissions (greater than 40% opacity) in six min/hour time period  
4-26-90 Finding of Violation by EPA at GS: NOV 0744  
- GS had not submitted quarterly EER's since installation of new blast furnace (about 1980); required to submit every quarter  
- enforcement may be brought, with penalties of up to \$25,000 per day per violation, or temporary or permanent injunction  
5-2-90 NOV 3049 issued to GS for failure to submit EER as scheduled  
5-22-90 Notice of excess emissions issued to GS (4-23-90) "will not be upgraded to a (NOV) at this time"  
10-22-90 Line of dead trees observed on hillside beyond stacks at GS  
12-19-90 DNR memo: "Please find enclosed copies of corrections (re:)...the violations at...SW. ...The existing baghouses serving the secondary crusher bldg and fine ore bins are not being operated..."  
3-26-91 DNR Air Pollution Inspection Notice: SW  
- wet scrubber for screening and secondary tertiary crusher not operational  
- baghouse for 3000 ton storage silos not operational  
- inspection forms sent to Central office, as compliance status of SW was as yet unresolved  
4-3-91 Letter to MDC: complaint re: dry tailings pile at WF and leaded dust blowing off of it on a regular basis  
10-11-91 PDWP violation notice: SW: no samples analyzed in Aug 1991  
10-29-91 PDWP violation notice: SW: no samples analyzed in Sept 1991  
1-28-92 DNR press release: Concentration of lead in ambient air near Glover has exceeded EPA national air quality standards. National health standard is 1.5mg/cm; Glover tested at 7.39mg/cm, or nearly 5 times safe level.  
3-9-92 NOV issued to GS by APCP for 3rd/4th 1991 qtr ambient air violations  
3-26-92 DNR inspection of SW by WPCP, APCP, PDWP, and SWP.  
- SW does not have a valid permit to dispense drinking water to public  
- poor construction of well casings  
- unpermitted solid waste storage area  
4-8-92 Uncovered/untarped truck hauling lead-bearing wastes reported leaving WR, releasing fugitive emissions  
6-4-92 PDWP violation notice: SW: no samples analyzed in Apr 1992  
6-16-92 Report of fish kill in West Fork of Black River: "...the river (had been) clear and supported a wide variety of aquatic life. Within the past couple of years, (it) has turned 'black' and shows no sign of supporting invertebrate or other life."

- 7-22-92 Summary of ww problems at GS: "Elevated levels of lead, zinc, and cadmium were detected in Big Creek, which flows by the smelter and receives the wastewater...Also a fish kill occurred in Big Creek, probably the result of heavy metal toxicity. ASARCO's permit was up for renewal in 1982, but because of the concern about metals in Big Creek, the renewal was denied by (DNR)." Negotiations that followed led to a new wastewater collection, holding, and treatment facilities in 1988. No significant water quality problems since then. Biomonitoring done in late 1991 did indicate acute toxicity to sensitive organisms; retesting more favorable.
- 7-31-92 NOV 3027 issued to GS: excessive lead in ambient air emissions, 1st quarter 1992 (353% of limit)
- 7-31-92 NOV 3030 issued to GS: excessive lead in ambient air emissions, 2nd quarter 1992 (153% and 465% of limit at two monitoring points)
- 7-31-92 NOV 3033 issued to GS: excessive lead in ambient air emissions, 2-3/7-92 (155% of limit at blast furnace)
- 8-3-92 NOV 3035 issued to GS: excessive particulate density, 2-3/7-92 (136% of limit at blast furnace)
- 8-3-92 NOV 3036 issued to GS: excessive particulate density, 2-3/7-92 (209% of limit at sinter plant)
- 8-12-92 NOV 3063 issued to GS: failure to maintain a continuous emission monitor for opacity, 3rd qtr 1990 thru 1st quarter 1992
- 8-12-92 NOV 3064 issued to GS: excessive lead in ambient air emissions, 4th quarter 1990 (209% of limit)
- 8-12-92 NOV 3065 issued to GS: excessive lead in ambient air emissions, 1st quarter 1991 (143% of limit)
- 8-12-92 NOV 3066 issued to GS: excessive lead in ambient air emissions, 2nd quarter 1991 (103% of limit)
- 8-12-92 NOV 3067 issued to GS: excessive lead in ambient air emissions, 1st quarter 1990 (125% of limit)
- 10-7-92 Results of opacity monitor audit (5-29-92) at GS: Unacceptably high calibration error (suggesting faulty equipment), zero error, and window dust accumulation (suggesting insufficient maintenance program)
- 10-9-92 NOV 3086 issued to GS: failure to maintain a continuous emission monitor for quality
- 10-29-92 DNR memo: Notes of field check of Black River above and below WF outfalls:  
 - "There were dramatic visual differences between the two locations. Above ASARCO, there was a small amount of algae, (and) the stream bed was...free of sediments (and) the color of sand and gravel. Below ASARCO, the bottom of the stream was completely covered with a dark brown floc-type material. There was also a greater amount of algae..."
- 11-16-92 PDWP violation notice: SW: no samples analyzed in Sept 1992

- 12-8-92 DNR memo: Dispute btwn ASARCO and DNR over new permit limits and solutions for metals in effluents. A local citizen is sampling water on own; "...apparently, some...landowners are contemplating a citizen's suit. The referral of ASARCO to the AGO for violations of their lead limit is currently undergoing legal revision
- 12-10-92 Update on fish kill in West Fork of Black River: (ref 6-16-92)  
 - several landowners downstream sampled stream in Oct 92: lead concentration at was 2427% over limit; nitrates in stream 10 times background level
- 12-15-92 DNR memo: re: ASARCO in the news  
 - "...ambient lead violations at GS...led us to recommend that ASARCO be designated nonattainment under new CAAA; that ASARCO filed a petition in federal court to reverse nonattainment designation and subsequently withdrew the petition."  
 - "...EPA has never approved a State Implementation Plan (to achieve air standards) for ASARCO..."  
 - "...DOH letter to DNR stopped short of declaring an imminent health threat; therefore we lack authority to issue the cease/desist order; that if/when DOH declares an imminent health threat, our air law REQUIRES us to issue cease/desist and we would not shrink from pursuing this. I stressed that Health is the risk assessment agency, and that DNR is the risk mitigation agency."  
 - "...ASARCO is buying up... private property around the plant and...this may impact the control requirements that the plant must implement to achieve the lead standard...."
- 12-16-92 WF water quality violations referred to AGO  
 3-93 Current and former surface impoundments at GS regulated under Missouri Hazardous Waste Management law (ref 5-28-93)
- 3-10-93 NOV 3183 issued to GS: exceeded lead standard for ambient air emissions, 4th qtr 1992: 288%, 107%, 647%, 145% and 150% of safe standard at five monitoring stations, respectively
- 3-11-93 Letter to Glover-area resident: Soil test through DNR results: high lead level in soil (one tested at 188% of safe standard, another tested at 760% of safe standard)
- 5-4-93 DNR memo: "Since ASARCO is on the DEQ Hot Sheet, we are... conduct(ing) a chronic (7 day) toxicity test at...GS ...Stream samples... will be tested..."
- 5-28-93 Expanded Site Inspection Report for GS by HWP/DNR (sent to ASARCO 4-14-94)  
 - Outfall 001: sanitary discharge; Outfall 002: cooling water discharge; Outfall 003: surface water basin  
 - all outfalls discharge directly to Scroggins Branch, which flows through property and into Big Creek  
 - "Due to the relatively high conductivity of this aquifer, potential widespread migration of contaminants is high. Some residential wells have

- detected low levels of metals. Two local residents are served by a well with levels above the safe level for arsenic."
- "Data suggests that hazardous substances have been released into surface waters and into areas that drain toward Big Creek and its tributaries. Metals have entered the food chain in the past."
  - Two homes within one mile of GS had excessive lead levels in soil
  - Surface water at GS thought to be impacted by blast furnace and truck unloading facility; a number of metals found were detected at different monitoring points, all in amounts over the permit limit
  - thallium level at outfall 003 tested at 19231 % of safe std
  - WET tests: Outfall 001 toxic to daphnids; outfalls 001 and 002 (chlorinated) toxic to both test species within one hour; outfall 003 acutely toxic to both species
  - 5 ppm lead is characteristic of hazardous waste; at GS, lead levels were:
    - 570 ppm at current impoundment
    - 62 ppm at north abandoned impoundment
    - 15 ppm at south abandoned impoundment
    - 180 ppm at outfall 003
    - 17 ppm at confluence of Scroggins Branch and Big Creek
    - 38 ppm 100' downstream of confluence
    - high lead levels in sediment were found as far as one mile downstream from confluence
  - grasses, standing and matted, were laden with lead; advised that livestock not be allowed to graze within three miles of smelter
- 6-3-93      Public Water Supply Inspection: SW
- Poor conditions noted during 3-26-92 inspection still evident; leakage in piping, improperly sealed casing top, outermost casing cut/broken.
  - Requested engineering report to address problems of construction and chlorination; due 9-1-93
- 7-9-93      Pump failure at GS outfall 001 led to contaminated water spill (ref 3-25-94)
- 7-13-93      DNR memo: "...HWP wishes to terminate discussions with ASARCO on the retention pond [surface impoundment; issue is whether to regulate as hazardous waste (DNR's opinion) or merely as a water-holding facility (ASARCO's opinion)] permitting, corrective action, superfund, et al. ...ASARCO has not negotiated in good faith and has consistently tried to gain significant advantages by trying to incorporate other issues. They originally had 30 days to reach an agreement, it has now taken over 5 months"
- 11-17-93      Complaint to DNR: "Tailings pond (is) damming up headwaters. Pure white lime is coming down stream"
- 11-24-93      NOV 15862 issued to GS: effluent over permit limits: daily max of mass lead exceeded (7-9-93); monthly ave of mass lead exceeded (July 93); daily max concentration limit for lead exceeded (7-9-93); monthly ave concentration for lead exceeded (July 93)

12-23-93 WET test results from GS: "unsatisfactory" (toxic) for *ceriodaphnia*; cited emergency discharge at outfalls 003 and 004 and discharge of contaminated water from surface impoundment

1-24-94 Consent Decree between AGO, DNR, and ASARCO/GS

- CD addresses issues raised as a result of the SA (12-2-86) related to the Retention Pond and clarifies regulatory status of pond pursuant to MO Hazardous Waste Management law.
- ASARCO ordered to: develop and submit engineering plan for segregation of process wastewater from other contaminated waters used in mining/milling process
- Stipulated penalties set at \$500 per day, per violation, after 31st day of violation, \$1000 after 61st and \$1500 after 91st day of violation

1-24-94 WET test results from WF, SW, and GS: Effluent from outfall 002 unsatisfactory for *ceriodaphnia*

3-8/9-94 Report of Compliance Biomonitoring Inspection at GS by EPA

- Records of self-monitoring (WET testing, NPDES limits, etc for compliance) were incomplete and, in some cases, missing altogether
- Some records of self-monitoring, as per above, were unavailable
- Issues of communication between EPA, DNR, RCRA (Hazardous Waste regulations) and ASARCO are hindering both compliance and monitoring of GS
- Extreme difference in metals concentrations between grab sample and 24 hr composite at Scroggins Branch, suggesting an unassessed point or non-point pollutant source on site; ASARCO should be required to identify the source and quantity of pollutants since they may not be covered under existing permit (ref: 5-2-94)

3-17-94 DNR memo: "... (WF) has had 22 months of exceeding lead limits... They were referred to the AGO in Dec 1992 and a petition was filed in May 1993. The AGO is beginning to act on the case again. ... Doe Run permits are up for renewal now. (Since ASARCO limits are based on water quality, and if) we reissue Doe Run based on technology, our ASARCO case is gone. ... (I) hesitate to (submit a penalty calculation to the AGO)... if we are not going to have consistent limits for the two companies."

3-25-94 DNR report followup to 3-9-94 EPA inspection:

- still a problem with single pump operating at GS outfall 001; concern that spill (see 7-9-93) could occur (again) in event of pump failure

6-29-94 Letter to GS: violation of NPDES permit limitations for zinc and lead, 1st qtr 1994

9-6-94 Consent Agreement between ASARCO, AGO and DNR re: removal of solids in double lined pond at GS (ref 3-20-95)

11-21-94 Performance Evaluation Report (PER), GS: Unacceptable levels of manganese and total suspended solids in effluent

11-21-94 PER, WF: Unacceptable level of zinc in effluent

11-21-94 PER, SW: Unacceptable level of zinc in effluent

11-22-94 Mining/milling activities at WF creating emissions that are potentially toxic and left off of Emissions Inventory Questionnaire (ref: 3-28-95).

12-28-94 DMR, SW: elevated lead level in effluent, outfall 002 (cooling water discharge)

1-20-95 DNR memo: "ASARCO was hoping to meet the total lead limit for their mine water discharge using cow manure to treat the mine water. ...Their pilot was successful in reducing total lead. But, it fails to meet BOD limits. ...This mine has been in noncompliance for years. Joe B., AGO, has filed suit, but little progress has been made (re: lead exceedences in mine water discharges at WF)."

1-20-95 DNR memo: "Somewhere we need to address closure of this facility and proper disposal of the manures and sawdust now laden with lead."

2-23-95 Complaint to DNR: "WF releasing powdery lime solution. Windy weather causes problems to be worse."

3-28-95 Report of Inspection: GS wwtf  
 - evidence of lead concentrate leaking from gondola cars at truck dumping facility  
 - concern that settling aid in basin water improperly monitored, leading to undetected toxic amounts of lead, etc. building up in wastewater and passing through outfall discharge.

3-28-95 DNR memo: re: 3-26-95 WF inspection and subsequent phone conversation with ASARCO environmental engineer  
 - WF continued to exclude several emission sources from EIQ (the same noted in 11-22-94 inspection)

4-4-95 Complaint to DNR: "Lime dust covering area around mine and off mine property. Especially noticeable on windy, dry days."

4-28-95 Letter to ASARCO re: proposed pilot biotreatment plant (cow manure filter, see 1-20-95) and emission of hydrogen sulfide gas as byproduct; as a regulated air pollutant in Missouri, ASARCO's release of hydrogen sulfide would require additional permitting through APCP.

5-21-95 Fish kill on Big Creek, downstream from GS

5-26-95 DMR's for WF, SW, and GS: GS 001 discharge 4-18-95: 2000 gallons contaminated water into Scroggins Branch; unable to test for BOD and fecal coliform

1-6/7-95 Report of Compliance Biomonitoring Inspection at GS by EPA  
 - Lead over limit at outfall 002  
 - continuous mound of ore concentrate piled in tracks, undiked and unmonitored and runoff thereby likely

11-22-95 WET test results: toxicity at GS 003, SW, and WF

12-26-95 WET test results: toxicity for *ceriodaphnia* at WF (three tests since October, two failed, one passed)

1-3-96 Letter to SW: "This...is the second communication concerning the lack of a permit to dispense water." (first letter sent 3-26-92)

1-16-96 Report of Inspection, WF: facility not in compliance; effluent not meeting permit limits

- re: compliance tracking: "negotiating final enforcement settlement currently"

2-5-96 PER for GS: Errored levels (inadequate test results) of cadmium, lead, and manganese; unacceptable level of oil and grease

2-5-96 PER for WF: Unacceptable levels of cadmium and oil and grease; errored level of zinc

2-5-96 PER for SW: Unacceptable levels of cadmium and oil and grease; errored level of zinc

2-7-96 Consent Judgement between DNR, AGO and ASARCO/WF for violations of federal and state Clean Water Laws

- \$1,700,000 civil penalty (payable to Reynolds County School Fund)  
 "represents full satisfaction of all allegations of past violations of...NPDES permit..."

- \$5,000 stipulated penalty for every exceedance of permit limits at WF beyond three in 12 months (4th exceedance and each thereafter levies a fine payable to Reynolds County School Fund)

- DNR to report back to AGO/court in mid-Dec 1996 to establish ASARCO's compliance and assess stipulated penalties, if any

3-11-96 NOV 2172 issued to SW: failure to completely report and calculate emissions from facility

4-28-96 DMR, GS: lead overlimit, outfalls 001 (394% of limit) and 002 (126% of limit), March 96

5-27-96 DMR, GS: temperature and lead (681% of daily max and 357% of monthly ave) overlimit, outfall 002, April 96

5-27-96 DMR, WF: lead overlimit at outfall 001 (632% of permit limit), May 96

6-27-96 DMR, GS: lead, zinc, and cadmium overlimit outfall 001 (775%, 4967%, and 1380%, respectively), May 96

7-28-96 DMR, GS: temp overlimit, outfall 002

7-30-96 Consent Decree btwn DNR, AGO and ASARCO/GS for excessive lead emissions

- revised State Implementation Plan

- schedule of construction and remediation to return to compliance

- stipulated penalties for noncompliance (up to \$1500 per day per violation beyond 91st day of noncompliance)

8-6-96 Boil order issued to SW for total coliform positive drinking water samples (lifted 8-16-96)

8-9-96 Oil spill into Scroggins Branch, GS

10-4-96 DNR memo: "Just rec'd call from (citizen) concerning...West Fork. He says the stream now looks like a sewer and smells like a sewer. Foam extends 2 miles downstream. Water is so discolored he can't see the bottom of Granddaddy Hole..."

10-4-96 NOV 17265 issued to GS: effluent over permit limits for lead and cadmium, March and April 1996

12-24-96 DMR, GS: outfall 001:

- TSS over limit (1778% of weekly ave, 2667% of monthly ave)

- BOD, fecal coliform and chlorine not reported

- pH low (measured for daily max, weekly and monthly aves.)
  - lead over limit (140278% of daily max limit, 315450% of monthly ave limit in lbs/day)
  - lead over limit (95000% of daily max limit, 9500% of monthly ave limit in mg/liter)
  - zinc over limit (31333% of daily max limit, 76593% of monthly ave limit in lbs/day)
  - zinc over limit (924% of daily and monthly max limits in mg/liter)
  - cadmium over limit (23615% of daily max limit, 61400% of monthly ave limit in lbs/day)
  - cadmium over limit (2314% of daily and monthly max limits in mg/liter)
- 12-26-96 Letter to DNR re: 12-24 GS DMR: 22000 gallons of contaminated water (see numbers above) discharged into Scroggins Branch due to pump failure and ice storm, causing power failure.
- 1-6-97 NOV 17273 issued to GS: effluent over permit limits for pH, TSS, Lead, Zinc and Cadmium (see 12-24-96)

# DOE RUN CO RECORD OF COMPLIANCE

## Water, Air, Hazardous Waste, Drinking Water

- 8-24-84 Settlement Agreement between DNR, AGO and Amax Lead (later becomes DRC/Buick M/M)
- 5-87 Memo citing DRC's request to pump tailings water to mine water pond at Fletcher M/M; SERO thought permit modification was in order
- 6-87 Letter to DNR from DRC citing heavy precipitation events and subsequent pumping of tailings water to mine water pond; "compliance with BAT reg. section 440.102 (c)(2) was cited by permittee"
- 6-22-87 Letter to DRC approving pumping of tailings water to mine water pond, without modification of permit
- 11-87 DRC documenting pumping of 400,000,000 gallons of water from tailings pond to mine water pond
- 2-18-88 *Post-Dispatch* article citing rise in lead emissions at Herculaneum nearly four times higher in 1986 than national average
- 3-2-88 Inspection report of Doe Run facilities:  
- Cited 2-6/7-88 spill at Fletcher M/M  
- need for maint/repair at Buick M/M lagoon  
- need for maint/repair at Viburnum #35 M/M (Casteel)  
- unauthorized discharge from collection pond below tailings dam at Viburnum #s 28 & 29
- 6-29-88 Amax-Homestake Lead Smelter becomes DRC-Buick Smelter (BS)  
Amax Lead Co of Missouri becomes DRC-Buick Mine/Mill (BM)  
St. Joe Mineral Co becomes DRC-Viburnum Division (VM)  
St. Joe Mineral Co becomes DRC-Fletcher Mine/Mill (FM)  
St. Joe Mineral Co becomes DRC-Brushy Creek Mine/Mill (BC)
- 7-12-88 Performance Evaluation Report (PER) for Buick: Unacceptable level of arsenic and inaccurately reported level of mercury in tested effluent
- 9-23-89 Public Drinking Water Program (PDWP) Violation notice: FM: no samples analyzed during August 1988
- 9-23-89 PDWP Violation notice: Buick: no samples analyzed during August 1988
- 9-23-89 PDWP Violation notice: Casteel: no samples analyzed during August 1988
- 10-26-88 PDWP Violation notice: FM: no samples analyzed in Sept 1988
- 10-26-88 PDWP Violation notice: Buick: no samples analyzed in Sept 1988
- 10-26-88 PDWP Violation notice: Casteel: no samples analyzed in Sept 1988
- 12-2-88 Report of Inspection of Non-Community Water Supply (NCWS) at Buick, FM, Casteel and BC  
- Poor integrity in well casing at FM (insects, storm water, etc entering potable supply)  
- BC well thought to be contaminated; used only for showers, flushing and clean up.  
- High counts of coliform in Buick well
- 12-21-88 *Daily American Republic* article citing plan to build recycling plant at Buick;

also notes that "Doe Run was fined \$1.25 million this year by the USOSHA for hundreds of health and safety violations at Herculanum smelter."

- 1-10-89 PDWP Violation notice: Buick: excessive coliform density in October 1988
- 3-23-89 Inspection report of Doe Run facilities:
- Cited need for maintenance/repair at Buick wastewater lagoon
  - need for proper operation and maintenance at wastewater facilities at Casteel
  - lagoon discharging inadequately treated wastewater
- 5-9-89 DNR memo citing potential problem with Crooked Creek below Casteel. Toxicity of effluent possible.
- 6-21-89 NOV issued to HS for three years of ambient air standard (lead) violations; demanded consent order with schedule of compliance
- 7-19-89 TNTC with coliform tainted drinking water sample: Casteel (two locations)
- 8-29-89 TNTC (contaminated) drinking water sample: FM (two locations)
- 8-30-89 TNTC (contaminated) drinking water sample: FM
- 8-30-89 TNTC with coliform tainted drinking water sample: FM
- 9-11-89 Letter to BM: "...EPA issued an interim objection to the reissuance of the NPDES permit for Buick..."
- 9-12-89 TNTC (contaminated) drinking water sample: FM
- 9-12-89 TNTC with coliform tainted drinking water sample: FM
- 9-27-89 DNR decision to issue hazardous waste management facility storage permit to DRC/Buick
- 9-27-89 TNTC with coliform tainted drinking water sample: FM
- 10-6-89 PDWP Violation notice: FM: excessive coliform density in August 1989
- 11-17-89 PDWP Violation notice: FM: excessive coliform density in Sept 1989
- 2-2-90 40,000 gallon (540,000#) of sulfuric acid spilled at HS; DNR took it seriously, DRC did not. Cited possible referral to EPA. DNR became aware of spill from concerned citizens.
- 3-9-90 Consent Order between DNR and DRC/HS.
- "...a review of ambient lead data...indicates that HS has been unable to meet...standard(s)...since 2nd qtr of 1986."
  - Compliance schedule assigned to HS, including equipment replacement, overhaul, modification and new purchase
- 3-19-90 Waste Management Case Study: Doe Run, Buick Smelter
- "Recent investigations into this site have revealed that the slag pile (about 480,000 tons disposed over 20 years; 5 acre pile, 20-55 feet thick, generally unvegetated) may be impacting both surface and ground waters in the area. Analyses show levels of heavy metals in these waters. ...blowing dust from the slag pile (has been listed) under 'Hazardous Conditions and Incidents.'"
- 4-19-90 Letter to citizen re: complaint of blowing slag particulates. Dust suppression agent to be applied on slag in Herculanum.
- 4-25-90 Complaint to DNR: "Brushy Creek has no (aquatic life). Suspect old smelter plant upstream..."
- 5-23-90 TNTC with coliform tainted drinking water sample: Buick (two locations)

6-4-90 Inspection report of Doe Run facilities: Concern with sewage treatment facility at Casteel; wastewater lagoon at Buick Mine. Demanded engineering report with timeline for compliance by 7-28-90 for both facilities.

6-20-90 PDWP Violation notice: Buick: Excessive coliform density in May 1990

6-26-90 NOV at FM for May 1990 drinking water violations

7-6-90 PER for BC: Unacceptable levels of arsenic in effluent

8-24-90 PDWP Violation notice: FM: Excessive coliform density in July 1990

8-31-90 FM proposal to DNR to "'further treat' excess rainwater by pumping from... tailing pond to...mine water pond rather than discharge through Outfalls 002 or 003." An explanation given as to how the practice conforms with the existing permit conditions.

9-25-90 PDWP Violation notice: FM: Excessive coliform density in August 1990

10-19-90 PDWP Violation notice: FM: no samples analyzed in Sept 1990

12-14-90 DRC proposed to DNR to process battery paste from spend lead acid batteries in the sinter process at HS and BS in order to create a demand for recycled batteries.

12-20-90 TNTC with coliform tainted drinking water sample: FM (two locations)

1991 114 workers laid off at HS

1-18-91 Tailings release from BC tailings pond

1-28-91 PDWP Violation notice: FM: Excessive coliform density in Dec 1990

1-29-91 Letter to DNR: wwtf down during June, July and Aug 1990 due to lack of water. Elevated arsenic discovered on 9-4-90. "Subsequent to this incident, the...waters are being metered into the wwtp at a level which can be handled by the wwtp"

3-18-91 DNR letter to DRC: EPA designation of DRC as "significant noncomplier" (SNC). Demands resolution of SNC status, without any infractions, by 3-28-91, including schedule of compliance

5-1-91 Letter to Buick from EPA listing 7 interim measures to have been completed that had not been fulfilled

6-18-91 DNR visit to Buick to approve use of battery storage bunker for broken battery storage. Leak in floor present (1 gal/hr) but no one able to determine source of or end result of leak.

- Storage area floor showed many signs of leaking batteries; "Until the facility receives final authority to use the bunker for breaking batteries a potential safety problem exists"
- Inadequate aisle space in storage areas hindering monitoring of leaks and spills, as well as safety

6-24-91 Report on evaluation of wastewater facilities, Casteel and Buick.

- Lagoons at Buick have not been properly maintained (excessive vegetation and erosion, scrap metal lying in area, no fence)
- noncompliance with NPDES permit limits for NFR in 1989
- Casteel effluent out of permit limits during last two annual sampling periods (recommended major overhaul and addition of equipment or complete replacement of existing system)

7-16-91 PER for BC: unacceptable level of arsenic in effluent

7-21-91 DMR for 2nd qtr, 1991: Outfall 002 flooded, discharge took place but no flow data available

7-26-91 Coliform tainted drinking water sample: FM (two locations)

8-5-91 DOH report of exceedance of bacteriological stds in FM water in July 1991

8-30-91 PDWP violation notice: FM: excessive coliform density in July 1991

10-11-91 PDWP violation notice: FM: no samples analyzed in August 1991

10-11-91 PDWP violation notice: Casteel: no samples analyzed in August 1991

10-11-91 PDWP violation notice: Buick: no samples analyzed in August 1991

10-29-91 PDWP violation notice: Buick: no samples analyzed in Sept 1991

10-29-91 PDWP violation notice: FM: no samples analyzed in Sept 1991

11-5-91 Complaint to DNR: "...mining company discharges toxic materials to Black River. ...Black discharge from mining operations. ...Looks like black ink from the air."

11-15-91 Letter to DNR from DRC/Buick: "Severe difficulties are being experienced (complying with permit standards for handling hazardous waste). Workers having to currently handle this haz waste manually; DRC wishes to handle in currently permitted "non-hazardous" area.

12-3-91 Settlement agreement btwn DNR, AG, and K&D Crushing (equipmt operator at BC)  
- fine of \$2000 for operating crusher without permit

12-5-91 Buick (Mine/Mill and Smelter) notified by DNR that they have been dispensing water for public consumption without a permit; application demanded and enforcement threatened

12-13-91 DNR memo: Discharge Monitoring Report (DMR) nonreporting violation possibility with BM; DRC wanted quarterly rather than monthly monitoring; permit modified to reflect change. Within a few months, they wanted yearly rather than quarterly. Permit renewal upcoming and some confusion as to how to coordinate between different DNR departments (as to) the desired testing frequency and reporting of tests.

12-17-91 PDWP violation notice: Buick: no samples analyzed in Oct 1991

1-13-92 PDWP violation notice: Buick: no samples analyzed in Nov 1991

1-22-92 Leak reported in leachate pile at Buick; tested high in specific conductivity and sulfates (i.e. contained battery acid)

1-24-92 Diesel oil spill at Brushy Creek

1-30-92 Leak in leachate pile at Buick finally located and repaired

1-31-92 PDWP violation notice: Buick: no samples analyzed in Dec 1991

2-20-92 DNR memo citing concerns of SERO with DRC's practice of discharging tailings water to mine water pond during heavy precipitation events; DNR had not, at that point, ok'd this practice, but knew that DRC was doing it anyway

2-13-92 DNR inspection of HS: Letter of Warning 92-SL.006 issued for RCRA inspection  
- inadequate and incomplete recordkeeping relating to receipt and of hazardous waste.

- 3-3-92 Complaint to DNR: "Trees are dying from air pollution. Algae all over Neals Creek and (Strother Creek)... (DNR) investigated this in 1987... (and) all conditions still exist."
- 3-24-92 NOV 3293: "Observed...a fan motor exhaust hood over the slag...was not on, thereby causing dense fugitive emissions to fill the building and escape a roof vent"
- 3-16-92 DNR memo: "All indications are that DNR has no trouble with...practice of providing additional treatment of excess storm water from...tailings pond by routing through...mine water pond. The facility descriptions, however, suggest that this does not occur. ...It also appears that the permittee keeps asking for our approval each time they mention the practice. It may be appropriate to modify the NPDES permit facility descriptions in order to document the routing of tailings pond storm water through the mine water pond"
- 4-3-92 DRC/Buick receives Resource Recovery Certification from DNR (though they have been storing hazardous waste for recycling, unpermitted, for nearly a year at this point)
- 5-4-92 DNR memo re: 4-13 HS inspection: "At the time of the inspection, it was noted that scrubber #10 had not been removed by 11-1-91, as specified in...March 1990 consent order. ...part of the emissions leaving scrubber #2 were instead routed to one of the new baghouses that replaces scrubbers 3,4,8 and 9. The Consent Order stated that scrubbers 2,3 and 4 would be upgraded"
- 5-15-92 Buick reported another leak in the battery bunker floor.
- 5-15-92 Complaint to DNR: "Strother Creek has high amount of algae, few crawfish and tadpoles. Suspect damage caused by mining and smelting operations."
- Subsequent investigation of creek beds below BC, BM, and FM show algae is beginning to grow. "This complaint and others like (it) have been reoccurring for years. Mining companies have studied the problem and the NPDES permit for West Fork (ASARCO) requires proposal actions to address algae growth. Mining companies are watching each other...Let the permit conditions work."
- 5-26-92 DNR inspection report of wwtf at: BC, FM, and Buick
- mine water discharge at Buick: staining and algae growth in Strother Creek
  - substrate staining noted in last years inspection of (BC) outfall 001 still evident
  - "a light brown algae was observed frequently on the stream substrate in Strother Creek, Bill's Creek, West Fork, and Bee Fork. ...The water in West Fork above Bill's Creek should not contain any mine discharge"
  - "Discoloration of streams below mine discharges and problems with excessive algae growth in area streams have been the subject of recent citizen complaints. Department files also contain documentation of a re(curring) algae problem."

- At DNR's request, DRC and ASARCO have both conducted studies (with UMR) to determine cause of staining. First report concluded large quantities of manganese in stream water blackens rocks. It also "pointed out...that certain forms of algae have the ability to 'trap and bind metals' resulting in very dark mats of algae." Second report describes a study of the algae problem and indicates that ground water pumped from the mines and discharged into the streams contributes to the growth of algae. Although significant noncompliance with NPDES permit limits was not demonstrated by these studies, noncompliance with 10 CSR 20-7.031(3) was inferred"
- 6-23-92 Memo from DRC: "... (We) thought we had a verbal agreement from Bob Hentges for this change (yearly instead of quarterly Whole Effluent Toxicity (WET) screening for all five permits). We will appeal any changes to the Clean Water Commission."
- 7-92 HS strike
- 7-13-92 Letter to Buick re: Inspection of wwtf: several maintenance areas in need of repair as they are prone to failure.
- 7-28-92 PER for Buick: Unacceptable level of TSS
- 8-17-92 Complaint to DNR: Bad smog from Herculaneum smelter going into town.
  - "A meeting with the public is scheduled in near future. DNR and DOH will participate. Violence as a result of the strike has made it inappropriate for SERO to investigate at present."
- 8-25-92 DNR memo: "...Town Council of Herculaneum would like representatives of DNR to attend public meeting to explain and address the environmental concerns of the citizens (primarily employees). ...The two issues raised so far are Air Pollution and Hazardous Waste. If we go over we should send someone knowledgeable about water pollution as well...."
- 9-2-92 Another request from DRC for reduction of WET testing to yearly from quarterly.
- 9-18-92 NOV from EPA issued to Buick for violation of RCRA permit: (4 violations)
  - unauthorized deviations from approved sampling methods
  - collection of insufficient numbers of samples
  - failure to use grids to collect sample locations
  - inadequate cleanup methods employed in contaminated areas
  - "The EPA is considering the assessment of monetary penalties...for each day of non-compliance... Such...penalties may be assessed at a rate up to \$25,000 per day, per violation."
- 10-13-92 Sulphuric acid spill at HS: 500 gallons
- 10-27-92 DMR for 3rd qtr, 1992: August sample lost (due to strike)
- 10-28-92 NOV 2180 issued to Buick (6-30-92 inspection)
  - 1 law, 2 genl permit conditions, and 2 special permit conditions violated (see 11-20 inspection report)
- 10-28-92 DNR inspection report of wwtf at BC, FM, VM
  - "In response to previous warnings of noncompliance at Buick... permittee...was issued Construction Permit..."

This permit expires 3-20-93. ...There was no evidence of any construction at the time of this inspection. The lagoon must be upgraded to maintain compliance with the NPDES permit."

Enforcement threatened

- "The staining of stream beds and problems with excessive algae growth below active mine water discharges in the New Lead Belt continues to result in occasional citizens complaints. Serious concern remains regarding compliance with 10 CSR 20-7.031(3)."

11-5-92

NOV 1885 issued to Buick: open burning of pallets and solid waste

11-20-92

Report of Inspection of Buick (6-30-92): LOW 92-SE-006 and NOV 2180 (10-28-92)

- open and incorrectly covered/sealed containers of hazardous waste
- Inadequate aisle space which could hinder worker safety or lead to fire hazard.
- waste stored in a manner that did not allow for inspection or free movement among containers.
- Leaking batteries lying on floors; acid accumulating in spills and washdown areas; floor noticeably damaged from acid
- Failure to make an amendment to the contingency plan due to a change in the design and operation of the facility.
- Failure to begin floor repairs in Breaking, Desulf. and Crystalliztn (BDC) building within one day of leak detection as called for in permit. (On inspection date, 6.26 gallon/day leak that had been addressed in 5-15-92 letter to DNR was still occurring, 52 days later)
- Hazardous waste accepted at facility without permitted approval
- open burning of solid waste (referred to APCP)
- worker on site stated that piles of vinyl and rubber coated cable were burned in blast furnace (also referred to APCP)

12-92

Permanent replacement of 300 workers, following strike, at HS

12-10-92

Another leak in battery bunker at Buick: over 33 liters/day, up from 3.5 liters the previous day. DRC stated it should have leak detected in a few days; "water was significantly acidic"

12-21-92

PDWP Violation notice: Buick: no samples analyzed in Oct 1992

1-26/27-93

Report of Compliance Inspection at Buick: "This was solely a gross evaluation of physical compliance"

NOV 1891 issued for following: (5 regulations cited as violated, though following observations noted)

- area for "exempt" lead-bearing wastes was filled with opened, leaking and spilled materials; had been as such for 3-5 weeks
- shredder unit in palletized storage area had malfunctioned "the day before" and there were piles of broken and leaking batteries in area.
- lead acid observed pooling and spilling on floor of battery bunker.
- piles of crushed components, paste, etc. were observed mounded up to the point that the piles were escaping the concrete confining system.

- more open and upset drums of "exempt" lead-bearing materials were observed spilling and leaking onto ground of backlot; waste oil was also observed spilled and disposed on the ground
- supposedly empty drums were being stored near a crusher crane's pathway; several drums were observed to be one-third to one-half full of lead-bearing components. Lead-bearing materials were observed on the ground near the drums. Soil was barren in this area, and lead-carbonate crystals were observed on soil
- Drums of "exempt" lead-bearing material, many open and/or leaking, were being stored around baghouse building
- thousands of drums of "exempt" lead-bearing material were observed being stored on the western siding of the railroad spur right-of-way. This material may have been stored on the siding for eight months or more. "Releases from tipped, spilled, leaking, etc. containers of dross, paste, componts, contaminated clothing, and other lead-bearing wastes which DRC accepts unmanifested as exempt material were observed on the ground in instances too numerous to count. It is estimated that greater than 25 % of the containers were open and the contents could be freely affected by precipitation and other weather effects"
- Solid waste disposed of on ground of back lot. Evidence of open burning, with charred remains of wood and 55 gallon drums split from heat. Contents of drums prior to burning not ascertainable.
- releases of lead-bearing material were documented from the estimated. hundreds of containers stored in bag house/acid plant.
- cracks and gaps in walls and floors of battery bunker
- "recyclable material" labels clearly affixed over labels of "hazardous waste" on drums stored in receiving yard

1-28-93

DNR memo re: 1-26/27-93 inspection of BR:

- Leaking battery bunker is only item not addressed from 6-92 NOV; "company portrays that they are perplexed on how to address the problem"
- The facility has approx 15,000 drums of "exempt" lead material received from off-site, many stored on bare ground. "It was an unbelievable mess." Supposedly stored there for 8 mos, but some information indicates a longer period of time.
- "likely operation of an unpermitted solid waste disposal area"
- air violations for open burning were evident, including drums of hazardous material
- "Doe Run was informed the "exempt" status...is NOT valid. A notice of violation was issued for unpermitted RCRA disposal units, the leaking battery bunker, and other more minor violations (and yes, they were smiling). Realizing they were in deep water, they have sent a letter back with us with certain committments."
- "The HWP plans to move rapidly forward with the issuance of an Administrative Penalty Order, including compliance schedules..."

1-28-93 DMR for 3rd qtr, 1992 CM: Out of permit limits for BOD and TSS  
 - Noted two emergency outfall discharges due to excessive rainfall, subsequent flooding, and equipment failure

1-29-93 Letter to DNR re: leak at leachate pile, Buick: up to 35.8 lpd from 23.7lpd; cited NOV 1891

2-8-93 NOV 3098: Lead emissions from south end baghouse nearly 19 times permit limit; at crusher cooler baghouse over 10 times limit.

2-9-93 Request from mayor of Herculanum for DNR to sample lead dust from streets of town; "plant periodically puts out very high emissions of SO2 and lead dust"

2-9-93 Letter to DNR from DRC/BR: timeline for compliance re: NOV 1891 (June 1); monthly visits welcomed

2-11-93 DNR memo: "We have not taken any action on the report of burning hazardous waste. It is my understanding that HWMP enforcement section will be issuing an administrative order...I would expect the burning...to be addressed in that order..."

2-17-93 Complaint to DNR: Lead dust blowing from trucks delivering to and from Herculanum smelter.

2-26-93 Another request from FM to DNR for changes in WET testing, from quarterly to yearly.

3-10-93 Complaint to DNR: Lead dust blowing from tailings pond (dry) at Fletcher

3-16-93 1992 Environmental Performance Summary  
 "We continue to lose money every month, but despite these losses we will not compromise our commitment to running a safe and healthy operation..."  
 - Blood lead levels of Herculanum children above national average; 5 children (of 75 tested) were given medical evaluations for dangerously high levels.  
 - Herculanum only met EPA air quality guidelines "at some...stations on some occasions through the year"  
 - Estimated toxic releases for 1992 at HS: 33,220# to air; 1174# to water; 52,050# to land

3-12-93 DNR denial of Buick request (2-26) for open-burning permit, for wood pallet burning

3-23-93 DNR letter to HS re: monitor downtime reported on Excess Emission Reports  
 - Reported monitor downtime of 21.9 percent for 4th quarter 1992  
 - "MACC has directed us to take enforcement action against sources reporting monitor downtime in excess of 1 percent. Your consent agreement of 8-15-80 compels your company to install, operate and maintain a continuous emission monitor system, and 10 CSR 10-5.090 compels your company to report to DNR your excess emissions in a quarterly report."  
 - APCP finds continued violations back to 2nd qtr of 1991. In the future, APCP will issue NOV's and pursue appropriate enforcement action.

4-1-93 DNR-HWMP called DRC legal counsel for guidance on who to address (Buick) administrative order to, in absence of any registered name or

- names with MO Secy of State. (DRC Legal counsel) Nowotny confirmed DRC is not registered...said it was complicated because DR is currently a partnership of out-of-state entities. DNR/ HWMP then called AGO expressing concern that an entity without the status of a 'person' possessed permits, was trying to obtain more permits and permit modifications, and was generally doing business. AGO relayed informally that in order to be valid, any present or future permits needed to be registered with Secy of State as a viable entity.
- 4-15-93 DNR meeting memo: Decided that DNR should proceed with referral of Buick case to the AGO through the Commission to seek penalties rather than issuance of an Administrative Penalty Order. Subsequently decided that there was a need to proceed with Administrative Order for Corrective Actions (without penalties) to be issued by department.
- 4-15-93 Black Smelter Acid (93.6% Sulfuric Acid, extremely hazardous) spill at HS: 2000 gallons on-site
- 4-19-93 DRC completed exploratory drilling on six sites of MTNF
- 4-20-93 Report of Compliance Biomonitoring Inspection-Acute: Cominco Metals Magmont Mine, Bixby (borders Buick)
- Effluent from outfall 001 acutely toxic to *Ceriodaphnia dubia*.
- 4-21-93 Report of Compliance Biomonitoring Inspection-Acute: Brushy Creek
- Effluent from outfall 001 acutely toxic to *Ceriodaphnia dubia*.
- 4-21-93 Report of Compliance Biomonitoring Inspection-Acute: Fletcher Mine/Mill
- Inadequate testing procedures and variance between samples taken for NPDES permit limit testing
- 4-23-93 More complaints from citizens in and around Herculaneum re: air, etc. SERO to handle all complaints, particularly in view of ongoing strike
- 5-12-93 Report of Inspection for HS: NOV 12780 for: excessive arsenic, lead, cadmium and zinc in effluent and 1-93 stormwater discharge from smelter into river
- 5-13-93 Letter to St. Joe Minerals Corp: "The petition submitted by SJMC requesting the development of a general permit for inactive mines is hereby denied"
- Denial cites EPA need for stringent testing of "major discharges" and potentially toxic "worst case" conditions
- 5-28-93 DNR memo: update on Buick case in AGO: 5-26-93 meeting between DNR, DRC, and AGO.
- If DRC agrees to submit a detailed list of actions to remediate Jan NOV, "MDNR will withdraw its draft order and shall not pursue referral of this case to the AGO for penalties and/or injunction"
  - "If a Voluntary Order on Consent with Penalties can be signed by 7-28-93, this will constitute satisfaction of MDNR's enforcement"
- 6-3-93 Overflow at FM seepage pump-back pond: approx 153,000 gallons of contaminated water leached into ground
- 6-17-93 Complaint to DNR: Noise from drilling is very bad; heavy metals leaching into stream from tailing pump; concern about water well quality

7-2-93 Consent Order for HS, with compliance schedule (SIP control measures)

7-11-93 DNR memo: Festus area citizens complaining of burning eyes, lungs, etc.  
Complainant mentioned that "odor" had tapered off by mid morning, but "this is happening off and on, on a regular basis." Because of strike, "there is a big turnover of employees who don't know how to run the equipment so every once and awhile the SO2 gets really bad."

7-12-93 Complaint to DNR: High lead levels in yard from HS. Recommended referral to superfund

7-13-93 Letter from HS re: temporary bypass of waste water; "...this is the first time in...Herculaneum (history) that the pump had to be removed...(It) will be reinstalled and activated as soon as (possible so that) we are not trying to pump the entire Mississippi River through our treatment facility."

7-15-93 PER for Buick: Unacceptable levels of copper; lead level errored

7-15-93 DNR memo: "Strikes don't authorize companies to turn off their equipment. If we can substantiate a pattern of turning the CEM off, let's enforce against them"

7-16-93 HS stack test: Dec 1992 testing found emission rates far in excess of permitted limits. Feb 1993 tests found lower emission rates (though still over permit limits)

7-16-93 DNR memo: HS not eligible for superfund investigation

7-21-93 DNR Inspection of Buick (from Enforcement file)  
- Under half of previously noted 15,000 improperly stored drums remained, most along rail spur of CoMinCo mine, and remaining contained various levels of low lead content material  
- Facility toured by rep of AGO's office as well as DNR rep

7-27-93 DMR for HS, 2nd qtr 1993: outfall 002 measuring device flooded entire qtr; arsenic levels coming down to limit levels

8-13-93 Complaint to DNR: (HS) Slag from haul truck losing lead bearing materials (fugitive dust) on streets and near homes; "ongoing problem, seven days a week"

8-14-93 Stormwater overflow at Buick: approx 259,140 gal contaminated water flooded DR property then entered Crooked Creek.

8-16-93 Settlement agreement between DRC/Buick, DNR and AGO: \$300,000 penalty to Doe Run  
- \$100,000 to Dent County School Fund  
- \$150,000 in improvements to Buick facility  
- \$50,000 donation to environmental projects  
- \$50,000 stipulated penalty to School Fund if Doe Run fails to comply with terms of agreement  
- Timeline of compliance issued

9-2-93 DNR memo re: NOV 1885 (11-4-92)  
- "...I need all the documentation you can find on the open burning incident...Is there any other documentation in your file to shed some light on why APCP didn't take action on this long ago?? I would think that this might have gotten wrapped up with the hazardous waste

enforcement...I'm at a loss here, the entire Doe Run file is missing from our county files. It's like this facility doesn't exist. It beats me what could have happened to it....I feel that after the large settlement extracted by HWP that Doe Run will balk at APCP's attempt to settle on the open burning if we don't have all the goods to prove our case..."

- 9-14-93 Letter to Buick re: NOV 1885 (open burning): Offer to settle out of court, otherwise seeking penalties under civil action initiated by AGO (\$10,000 per day, per violation)
- 9-20-93 Complaint to DNR: Improper disposal of lead-contaminated waste; blowing of lead-contaminated sand from flooded areas of HS
- 9-20-93 Complaint to DNR: HS dumping lead-contaminated sand on city property
- 9-30-93 Stormwater overflow at Buick: 246,750 gallons contaminated water flooded DR property then entered Crooked Creek
- 10-19-93 Compliance Biomonitoring Inspection-Acute at Buick (EPA)
  - Acute toxicity to *pimephales promelas* from effluent
- 11-8-93 PDWP violation notice: Buick: no samples analyzed in Sept 1993
- 11-9-93 DNR letter re: 8-14, 9-25, and 9-26 stormwater events at Buick
  - DMR's indicate six violations: No samples take during 8-14 event; excessive lead 8-16; low pH 8-16; and no WET tests conducted on any of the three days.
- 12-10-93 New leak reported in Buick Battery Bunker
- 12-13-93 Report of Compliance Biomonitoring Inspection-Acute: Herculaneum Smelter
  - Arsenic in effluent during Feb 1993 (ave) was nearly 4 times permit limit
- 12-21-93 Complaint to DNR: Tailings leaching into Indian Creek (Viburnum #29); concern over private well contamination to be referred to DOH
- 1-3-94 EPA issue of Complaint, Compliance Order, and Notice of Opportunity for Hearing to DRC/Buick
  - action taken for failure to comply with Interim Measures Plan (under guidelines of RCRA)
- 2-7-94 Report of Inspection (12-21-93), Buick:
  - Acute toxicity of effluent to *ceriodaphnia dubia* and *pimephales promelas* at outfall 001
  - excessive lead in smelter stormwater ponds, from 8-93 test
- 3-10-94 Complaint to DNR: Excessive emissions from HS. City is dumping slag on roads for snow control
  - follow up investigation on 5-18-94; no violations noted at that time (though by this date snow control no longer necessary)
- 3-23-94 Complaint to DNR: Blowing tailings from (dry) ponds creating health problems (Viburnum #28)
- 4-1-94 Doe Run Company bought by Renco Group, Inc.
- 4-4-94 DNR memo: Concern that ASARCO/West Fork has different permit limits than DRC, and since DRC has permits up for renewal, "this is a good time to make sure there is consistency"

4-14-94 Stormwater overflow at Buick: contaminated stormwater (approx 687,800 gal) flowed directly into Crooked Creek

4-20-94 Letter to BC re: Emission Inventory Questionnaire (EIQ): deficiencies noted

- No emissions info included on exhaust for underground workings.
- No emissions info included for fugitive emissions for tailings areas.
- No emissions info included for toxics, including lead.

4-25-94 Letter to Buick re: EIQ: deficiencies noted

- Incomplete emissions info for process flow schematic
- Incorrect emissions rates applied to secondary smelter
- No emissions info for toxics in secondary smelter
- Omission of justification for secondary smelter control efficiency

4-29-94 HS reported excessive zinc and lead in effluent on two occasions in Jan and Feb, 1994

5-26-94 NOV 15899 to HS re: 5-11-94 inspection

- Significant violations of permit limits for effluent: Lead and zinc in Jan; Lead, zinc, and TSS in Feb.
- DNR/SERO "gets several citizens complaints a year re: air emissions"

6-1-94 Engineering inspection report by independent firm retained by Buick: Battery Bunker, Paste Storage Bunker, and Rotary Melter Bunker (areas of previous violation and concern to DNR)

- Floor in traffic areas of BB eroding and bare concrete exposed in several areas
- Protective steel plates in BB flooring damaged
- Concrete walls in BB deteriorated and of structural concern
- Bare concrete exposed in several areas of PSB
- Exposed wire and wire mesh in PSB
- Stainless steel wall panel pulling away from concrete wall in PSB
- Missing or deteriorated protective coating in wall of RMB

6-8-94 Stormwater overflow at Buick: contaminated water flowing (at approx 159 gal/min) directly into Crooked Creek (flowing since 6-6-94)

6-15-94 Report of Investigation of unsafe drinking water: Buick Mine

- "...Requested 4 repeat samples be taken (after first samples failed). Four of the five repeats taken 6-21-94 were fecal positive...Boil order was issued."

6-28-94 Letter to Nowotny (DRC legal counsel) re: DRC's status as Habitual Violator; disclosure statement due 8-15-94

6-29-94 DMR for 2nd qtr 1994, HS: zinc over limit again; several lost (i.e. untested) samples; personnel changes resulted in inadequate or inaccurate testing

7-2-94 Stormwater overflow at Buick: approx 567,120 gal contaminated water flowed directly into Crooked Creek

7-26-94 DNR and DRC meeting re: limits on permit and persistent overages; DRC wants new limits (so they won't always be in noncompliance)

8-1-94 PDWP violation notice: Buick: excessive coliform density in June 1994

8-17-94 Letter to DRC: "Results from the 1-1-94 to 6-30-94 lead and copper analysis indicate that FM has a 90th percentile lead level of .016 mg/l.. (A)

- lead level above .015 mg/l at the 90th percentile exceeds action levels."
- DRC placed on compliance schedule
- 8-17-94 Letter to DRC: "Results from the 1-1-94 to 6-30-94 lead and copper analysis indicate that Buick Smelter has a 90th percentile lead level of .0197 mg/l.. (A) lead level above .015 mg/l at the 90th percentile exceeds action levels.
- DRC placed on compliance schedule
- 8-17-94 Letter to DRC: "Results from the 1-1-94 to 6-30-94 lead and copper analysis indicate that Buick Mine/Mill has a 90th percentile lead level of .2717 mg/l.. (A) lead level above .015 mg/l at the 90th percentile exceeds action levels.
- DRC placed on compliance schedule
- 8-20-94 Letter to DNR from citizen complaining of SO<sub>2</sub> gas emissions from HS; demanded continual monitoring rather than intermittent (weekly) to gauge noncompliance
- 9-5-94 DNR memo: "... (since meeting in July) I've found out that (Buick) outfalls 002 and 003 will still have to be monitored and have (EPA) limits...so I'm sure DRC would not be interested in establishing another in-stream monitoring point. That was a trade-off for eliminating monitoring overflows..."
- 9-6-94 Stipulation agreement between HS and DNR
- Submittal to EPA of SIP to achieve compliance with air standards (replaces Order of 7-2-93)
  - Order of Contingency Control Measures (replaces Order of 7-2-93)
  - Ordered to fulfill Order of 7-2-93
- 9-13-94 EPA comments on 4 public notices for permit renewal: Casteel, Viburnum, Brushy Creek and Fletcher
- found discrepancies between permit limits and recently amended state standards.
  - "This letter serves as an interim objection to the reissuance of these permits"
- 9-16-94 DNR memo: more discussion on water quality limits for mines/mills; apparently, EPA is withholding their OK until standards are tighter, permittee complaining about unnecessary stringency, and DNR sick of all the paperwork and go betweens (as Buick permit is up for reissuance...)
- 10-1-94 Report of Inspection of Buick: 6-7/8-94 RCRA Inspection: LOW 94-SE-003
- Failure to have waste stored in containers in good condition (hazardous waste seen leaking onto floor and ground)
  - Floor in containment area showed large cracks, i.e. NOT impervious to leaking waste
  - Inadequate aisle space in storage areas, hindering worker safety and fire codes
  - Inadequate recordkeeping of hazardous waste shipped offsite (four violations)

- Failure to complete necessary paperwork on out-of-state hazardous waste shipments
- Failure to maintain adequate operating records
- Failure to maintain appropriate personnel records re: handling of hazardous waste
- Failure to develop facility contingency plan (2 violations)
- 10-5-94 HS granted permit to reclaim lead waste (from Buick) and use in smelting operations
- 11-5-94 Stormwater overflow at Buick: (referenced only in 9-17-96 Settlement Agreement)
- 11-8/9-94 Stormwater overflow at Buick: approx 114,700 gallons of untreated water discharged directly onto DRC property prior to flowing into Crooked Creek
- 11-14-94 Stormwater overflow at Buick: contaminated water flowing (at approx 225 gal/min) directly into Crooked Creek ("continues to flow" as of 11-15-94 letter writing)
- 11-21-94 PER for VM: Unacceptable levels for Cadmium, pH, TSS
- 11-21-94 PER for FM: Unacceptable levels for Cadmium, pH, TSS
- 11-21-94 PER for BC: Unacceptable levels for Cadmium, pH, TSS
- 11-21-94 PER for HS: Unacceptable levels for Cadmium, pH, TSS
- 11-21-94 PER for BM: Unacceptable levels for Cadmium, pH, TSS
- 11-21-94 PER for BS: Unacceptable levels for Cadmium, pH, TSS
- 12-1-94 DNR Report of Inspection, Buick: facility out of compliance
- permit limits for antimony set too low, resulting in inadequate flow from collection tank and subsequent stormwater overflows which often end up violating permit limits anyway: "The company should reevaluate the environmental consequences of an exceedance of the limit for antimony versus the environmental effect of discharging untreated wastewater when the six million gallon tank overfills and overflows."
- effluent testing at levels to be acutely toxic to two test organisms (as per 10-19-93 EPA tests)
- 12-9-94 Diesel fuel (500-700 gal) spill in Viburnum Mine #28
- 12-18-94 Stormwater overflow at Buick (referenced only in 9-17-96 Settlement Agreement)
- 1-31-95 Compliance sampling Inspection of HS by EPA
- Review of 1994 DMR's found: Over limit for zinc and lead in Jan; over limit for zinc, lead and TSS in Feb; unreported values for TSS and sulfate in April; unreported value for arsenic in Dec.
- Viburnum facility, responsible for testing HS, reported unacceptable results for copper and TSS during 1994. "This undermines the credibility of the Herculaneum self-monitoring data for copper and TSS in 1994."
- Excessive pH on 2-1-94.
- Inadequate monitoring for pH (does not meet EPA standards)
- 2-9-95 DNR memo discussing SO2 peaks at HS; cause, solution, interim management... "Herc's still having bursts!"

**\*\*IDENTICAL  
NUMBERS  
for 6 facilities:  
VM (DRC lab),  
FM, BC, HS,  
BM and BS\*\***

2-27-95 Addendum to Jan95 DMR: over limit for zinc at Buick outfall 002

3-15-96 Compliance Evaluation Inspection at Buick, conducted by HWMP of DNR:  
LOW 95-1.012

- Inadequate labelling of hazardous waste in on-site storage
- Failure by facility to provide annual review of training in hazardous waste handling procedures
- Inadequate documentation of training for employees in hazardous waste handling procedures
- Incomplete contingency plan for emergencies
- Inadequate record keeping of hazardous waste shipments
- leaking oil (lead-bearing waste) in drum in storage area
- contaminated water and sodium sulfate leaking out of bottom of trailer in shipping area

3-20/21-95 Compliance Biomonitoring Inspection-Acute of Buick by EPA

- Acute toxicity for *ceriodaphnia dubia*

3-22-95 Performance Audit Inspection of Viburnum lab (by EPA) to assess procedures of self-monitoring and other NPDES permit requirements.

- Re: unacceptable levels of pH, Cadmium, and TSS in 1994: no procedural or equipment problems were discovered to explain the error in the pH or TSS evaluations. Cadmium had been reported incorrectly.

3-27-95 DMR for Feb 1995: over limit for zinc at Buick

4-19-95 DMR for 1st qtr 1995: all zinc levels finally at permit limits

3-29-95 Local WIC program reported a high blood level for a child in Viburnum.

6-1-95 Open fire at Buick: approx 300 wood pallets burned

6-30-95 Letter to Buick: Jan and Feb 1995 effluent out of permit levels for zinc

7-15-95 PER for HS: Unacceptable levels of arsenic, copper and lead

8-2/3-95 Compliance Evaluation Inspection Report of Buick by HWMP: NOV 4132

- Inadequate labelling of hazardous waste in on-site storage
- Inadequately maintained groundwater monitoring well casings
- Inadequate record keeping (inspection forms not kept for three years)
- acceptance of hazardous waste without a hazardous waste manifest
- failure to operate the facility in manner which minimizes potential for emergencies
- failure to submit unmanifested waste report
- inadequately stored hazardous waste containers (not closed as needed)
- inadequately marked and tracked hazardous waste containers (in violation of 8-16-93 Settlement Agreement)

8-7-95 Complaint to DNR: "DRC poisoning our town with lead. ...the readings for lead ambient air were 6.5 for...first quarter of 1995 --more than four times allowable levels."

- (DNR response): "Violations have occurred. A SIP has been developed. The company is making progress toward compliance."

8-25-95 Pallet fire at Buick

8-25-95 Letter to DNR from citizen: "Please do something about the lead battery producing plant at Doe Run in Herculanum. ...Batteries are not

worth human lives. ...I already have a fatal disease of the immune system because not enough people in the generation before me gave a damn. "

8-25-95 Letter to Gov Carnahan: Cited report on *TV Nation* re: HS lead levels well above safe limits (tested in children's blood, from dust wiped off of camera equipment, etc.)

8-25-95 Letter to DNR: "...we are petitioning you to take steps to investigate the dangerous levels of lead pollution near the DRC smelting plant."

8-25-95 \$25 million class action suit filed against HS

8-31-95 LOW 95-3.009 re: 8-2/3-95 HWMP Inspection

9-13-95 DNR memo: re: comprehensive complaint investigation of emissions from DRC/HS. Series of complaints over last 4 weeks, most citing burning eyes and nasal tissue from excess SO2 emissions.

- No violations found, but records log of sinter plant showed high emissions that seemed to match times of high complaint
- "Even in the absence of violations the operation of the sinter plant shows a sensitivity to citizen complaints. We need to monitor this situation to maintain a better organized and more comprehensive record of the facts."

9-14-95 Letter to DNR from HS enviro manager: "Review of operations over...3 days (Sept 2-4) indicates that the company decreased operation of the facility to reduce the facilities impact, even though they were far from exceeding the standard. "

DRC to begin building 550' stack (current stack: 350') to reduce emissions problems with people during low wind speed conditions.

9-17-95 *Courier Journal* article citing personal injury lawsuit against DRC/HS for "reckless negligence" in releasing lead and other contaminants into air during operation; demands \$25,000 for each of 10 leaded kids

- (regarding 1992 strike and replacement of local workers): "That was the worst thing they could have done for themselves. ...Disbanding the union left us with our complaints and nothing to lose. ...Basically (DRC) is saying, 'We're polluting your community, but you're responsible for cleaning it up.'

9-20-95 Letter to EPA re: DRC/HS and continued operation, despite noncompliance with air and water laws

9-22-95 DMR for VM, 8-95: lead over limit for at Casteel

10-13-95 Letter to DNR (Shorr) citing conditions in Herculanum and inviting him to "come to town and stay a few days..."

10-25-95 Response to 8-25 Gov letter from DNR/Shorr: "Air monitoring near the plant has shown violations of the national air quality standard for lead. Federal and state laws require that the company work with us to reduce their lead emissions. However, these laws do not give us the authority to close the plant....Because Doe Run is following their plan to reduce lead emissions, they have until Dec 30 of this year to show that their emissions are safe again. If the company continues to violate the lead standard after that date, I assure you that the DNR

- will require the company to correct the problem."
- 10-25-95 Response to citizens letter of complaint from DNR/Shorr: Compared allowable lead to 5 aspirin tablets in a baseball stadium... "Setting such a small limit (of allowable lead in air) reflects the USEPA's understanding of the dangers of breathing lead. ...air quality in Herculaneum has improved, but we have not yet met the standards."
- 10-25-95 Response to citizens letter of complaint from DNR/Shorr: Cites current air law requirements; "...this permitting authority did not exist when DRC began operation" Apparently, DRC grandfathered in and can't be regulated or required to comply with current EPA standards; can only be asked...
- Cites 1980 DNR/EPA plan to bring everyone into compliance with NAAQS. By 1986, all but three of MO companies in compliance; those three are located in SE part of state; 1992 plan to bring DRC into compliance; "...they do not yet meet the standard."
  - Despite lacking authority to bring DRC into compliance, Shorr assured complainant that if compliance wasn't reached by 12-30-95, "I assure you that the DNR will require the company to correct the problem."
- 10-26-95 Buick notified by DNR that they have been dispensing water for public consumption without a permit
- 10-26-95 DMR and WET testing for 3rd qtr, 1995, Casteel: toxicity for *Daphnia magna*; source unknown.
- 11-7-95 NOV 2689 issued to Johnson Controls for shipping hazardous waste to Buick under incorrect manifest
- 11-27-95 DMR and WET testing for Oct 1995, VM: verbal report ok'd both species in WET testing; no confirmable lab results.
- 12-7-95 Report on Inspection of water supply at BC and Buick: both systems out of compliance for chlorine residual problems
- 12-12/13-95 Compliance Evaluation Inspection Report on Buick by HWMP: LOW 95-4.015
- Inadequate aisle space, hindering worker safety and fire codes
  - Improperly and dangerously stored hazardous waste in unpermitted storage area
  - facility not conducting inspections as ordered to by permit (failure to conduct daily inspections on two occasions; failure to remediate repairs noted in inspections, and permit-warranted inspection paperwork not being utilized, failure to use various worker safety measures as dictated by permit)
  - noncompliance with 8-16-92 Settlement Agreement:
  - uncoded and improperly stored drums, and leaking drums;
  - damaged drums containing hazardous waste (potentially dangerous)
  - spill of used waste oil on ground
  - incomplete manifests for hazardous waste shipped off-site

12-18-95 Stormwater overflow at Buick: approx 369,000 gallons of untreated water discharged directly onto DRC property prior to flowing into Crooked Creek

12-26-95 DMR and WET testing for Nov 1995: Buick over limit on zinc (26.5 percent above permit limit); blamed "earth moving project"

1-26-96 Complaint to DNR: "...air stinks in Herculeaneum"; complainant called DRC about problem but calls never returned

1-26-96 DMR for 4th qtr, 1995: Buick still over limit on zinc, at two outfalls; "We are undergoing a special sampling regime to try to indentify the source of the zinc"

1-30-96 DNR investigation of 1-26 complaint; no odor detected; left copies of "Odors to Ambient Air" (10 CSR 10-5.160) at home of complainant; "APCP pollling SO2 data to determine if an SO2 exceedance has occurred."

2-5-96 PER for BC: Unacceptable levels of arsenic and mercury \*\*IDENTICAL

2-5-96 PER for FM: Unacceptable levels of arsenic and mercury NUMBERS

2-5-96 PER for HS: Unacceptable levels of arsenic and TSS for 4 facilities:

2-5-96 PER for CM: Unacceptable levels of arsenic and mercury BC, FM, CM,

2-5-96 PER for BM: Unacceptable levels of arsenic and mercury and Buick\*\*

2-5-96 PER for BS: Unacceptable levels of arsenic ; extreme toxicity of WET test to fathead minnow, *ceriodaphnia dubia*, and *daphnia magna*

3-1-96 DNR Inspection report, HS (1-30-96): "Review of the SIP work practice manual resulted in finding that the facility had failed to comply with the specific inspection and recordkeeping requirements outlined in the revised...manual." DRC inspecting and maintaining sites on a 6 month basis, rather than monthly as required. "The NAAQS for lead has been exceeded in a number of instances..."

3-5/6-96 Compliance Evaluation Inspection Report of Buick by HWMP: LOW 96-1.010

- failure to label storage containers correctly
- failure to use storage containers in good condition

3-18-96 EIQ audit finds incorrect calculations of emissions by Buick: EIQ stated 54 tons of emissions; actual tonnage was 1423. Buick assessed penalty of \$35,183.30 for difference of 1369 tons (at \$25.70 per ton)

4-17-96 DNR letter to Buick: Facility out of permit limits for zinc at outfall 002, Nov and Dec 1995

4-24-95 DMR for 1st qtr, 1996: Buick 003 back in limit in mid-Feb, 002 back in limit mid-March.

5-13-96 DNR memo: FM installing concrete batch plant, proposing to use tailings ("for replacing pillars or filling back in the mine?") APCP not sure if this is permittable, permitted or something they need to concern themselves with...

3-27-96 Letter to HS: "...there is a need to revise the SIP for lead (for HS)"

- "Although the national std has not yet been achieved, the area out of compliance has shrunk considerably"

- "...APCP intends to begin developing a maint plan for the Buick facility, leading to a request to the EPA for redesignation of the Buick lead nonattainment area"
- 4-24-96 DMR for 1st qtr 1996: Buick over limit, outfall 003, mid-Feb; outfall 002, mid-March
- 4-29-96 Letter to APCP from Buick asking that enforcement on excessive emissions (see 3-18-96) be withheld until discussions could take place between DRC, DNR, and APCP
- 5-29-96 DMR for April, HS: emergency bypass opened 4-29 for 4.5 hours due to heavy rain; approx 18,562 gallons untreated water lost
- 5-29-96 Letter to DNR: Fletcher tailings pond reporting overage of 126,547,000 gallons; plans to pump to mine water pond (as in April 1994), treat, and then release to Bee Fork.
- 6-11-96 Letter to DRC from APCP re: 1993 EIQ dispute
  - "Presently, we and the EPA are discussing the most recent lead mining emission factors, their background, and their applicability. After we receive a guidance statement from the federal agency, we will convene a working group to resolve the outstanding issues. Accordingly, until you are notified to the contrary, we will hold in abeyance enforcement action resulting from disputed emission factor issues with Doe Run."
- 6-27-96 Engineering report by independent engineering firm retained by Buick: Battery Bunker, Paste Storage Bunker, Rotary Melter Bunker, Santa Maria Bunker
  - ramp in BB has bare concrete exposed
  - large part of floor (traffic area) is exposed and deteriorating
  - grout repair in PSB failing and breaking
  - most of remaining area of PSB shows bare concrete and deterioration
  - drainage of the PSB floor to the collection point has been adversely affected by floor repair attempts.
  - majority of area in RMB is void of asphaltic coating, and coating that remains is deteriorating
  - "Basically all of (SMB)...has bare concrete and showing definite signs of deterioration."
- 7-10-96 Compliance Evaluation Inspection Report for Buick by HWMP: LOW 96-3.004
  - failure to use storage containers in good condition
  - inadequately prepared manifests
- 7-18-96 DMR and WET testing for 2nd qtr, 1996, VM: WET failure at Casteel 003 for fathead minnows
- 8-1-96 DNR memo: still some questions as to permit allowances for Fletcher batch plant and use of tailings as fill
- 9-17-96 Settlement agreement between DNR, DRC, and AGO for unauthorized discharges at Buick 003
  - stormwater overages into Crooked Creek at Buick: 11-5-94; 11-9-94; 11-14-94; and 12-18-94

- Doe Run at fault for manipulating flow at Buick 001 to comply with antimony limits of permit and subsequently going over at Buick 003
- stipulated civil penalty of \$5,000 for each day that an unauthorized discharge occurs at Buick 003 in next year, with fine going to Iron County School Fund
- 9-23-96 HS reported overflow of untreated water into containment area; dam had been breached and overflow onto property and into Mississippi River was 2-3" deep, 5-6' wide. "The time to complete the repair will depend on rainfall."
- 9-26-96 Stormwater overflow at Buick: contaminated water flooded DRC property and flowed directly into Crooked Creek
- 10-1/2-96 Compliance Evaluation Inspection Report of Buick by HWMP: LOW 96-4.002 and NOV 3077 for following:
  - failure to use containers in good condition (torn boxes, leaking bags, etc)
  - failure to send Land Disposal Restriction certifications with hazardous waste manifests and retain on site for 5 yrs
  - failure to maintain manifest records correctly (two violations)
  - failure to conduct weekly inspections
- 10-4-96 Letter to Buick re: 9-26 overflow and demand for \$5,000 as per 9-17-96 Settlement Agreement
- 10-24-96 DMR for 3rd qtr 1996, VM: lead at Viburnum 004 over limit
- 11-7-96 WET test results from 9-26 stormwater overflow at Buick: extreme toxicity to *ceriodaphnia dubia*
- 11-27-96 DMR for Oct 1996: lead down below limits, after going well over limit in Sept; zinc over at Buick 002
- 12-9-96 DNR memo: "Due to the repeat appearance of the (Buick) facility on the Quarterly Noncompliance Report, the WPCP is required under the SEA to take formal enforcement action or EPA will take enforcement action at the federal level."
- 1-20-97 DMR for 4th qtr 1996, VM: zinc over limit at Viburnum 002 and 003; zinc average over limit at Buick 002; reminder of construction of new tailings pond at Buick
- 2-3-97 DEQ quarterly monitoring report : Effluent at Buick 002 over on zinc
- 2-5-97 Terms and demands of DRC Settlement Agreement of 8-93 finally met
  - DNR letter to AGO: "I am requesting that you issue a letter to DRC which informs them that...DNR did not issue Administrative Order #94-H-003 to DRC, and they are apparently confusing this supposed Order with the Settlement Agreement which was finalized in Aug. 1993..."
- 3-6-97 Letter to WPCP re: proposed settlement offer of 2-4-97 (ref only here) concerning Buick overages of zinc
  - "...we would like to suggest and offer the following:
    - Completion of new Tailings Dam seep collection pond by 4-30-97
    - any negotiated settlement agreement and penalty should include current or recent permit violations

- "Because we have already committed over \$100,000 to complete this construction activity, we would like to request that the penalty amount be reduced to \$10,000, with the balance of the original proposed \$30,000 amount being applied to the project."